

METRIC

ATPD 2230

9 January 1998

SUPERSEDING

MIL-DTL-62327B(AT)

5 October 1995

## PURCHASE DESCRIPTION

CARRIERS, ARMORED, FULL TRACKED, M901A1,  
AND M901A3 TOW VEHICLE (LESS TOW WEAPON) AND M981,  
AND M981A3 FISTV; PROCESSING FOR STORAGE AND SHIPMENT OF (METRIC)

This purchase description is approved for use by the U.S. Army Tank-automotive and Armaments Command, Department of the Army, and is available for use by all Departments and Agencies of the Department of Defense.

### 1. SCOPE

1.1 Scope. This purchase description covers the processing for storage and shipment of the M901A1, and M901A3 Combat Vehicle, Anti-Tank, improved TOW vehicle (less TOW weapon) and M981, and M981A3 Fire Support Team Vehicle (FISTV) (see 6.1).

1.2 Classification. Processing is classified into the following levels:

Level A - Maximum military protection. Level A is the processing required for the protection of vehicle during shipment, handling, and storage exceeding 90 days from date of actual processing. This level does not provide for driveaway capability. It does provide for domestic or overseas shipment, including open deck loading.

Level B - Minimum military protection. Level B is the limited processing required for the protection of vehicle during shipment, handling, and storage not to exceed 90 days from date of actual processing. This level provides for driveaway capability, when specified, and domestic or overseas shipment (excluding open deck loading).

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: U.S. Army Tank-automotive and Armaments Command, ATTN: AMSTA-TR-E/BLUE, Warren, MI 48397-5000, by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A

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DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

## 2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in sections 3 and 4 of this purchase description. This section does not include documents cited in other sections of this purchase description or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirement documents cited in sections 3 and 4 of this purchase description, whether or not they are listed.

### 2.2 Government documents.

2.2.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2).

## SPECIFICATIONS

### FEDERAL

A-A-203	- Paper, Kraft, Untreated.
A-A-208	- Ink, Marking, Stencil, Opaque (Porous and Non-Porous Surfaces).
A-A-374	- Sodium Bicarbonate, Technical.
A-A-883	- Tape, Pressure-Sensitive Adhesive, Masking.
A-A-1800	- Varnish, Oil: Spar
A-A-1898	- Cushioning Material, Cellulosic, Packaging.
A-A-50177	- Paper, Lens.
A-A-52506	- Clamps, Hose.
A-A-52518	- Tire, Pneumatic: Retread and Repair Materials.
A-A-52546	- Hose, Performed: Semi-Flexible, Reinforced.
A-A-52624	- Antifreeze, Multi-Engine Type.
A-A-55057	- Panels, Wood/Wood Based; Construction and Decorative.
O-S-801	- Sulfuric Acid, Electrolyte (for Storage Batteries).
P-D-220	- Detergent, General Purpose.
TT-E-529	- Enamel, Alkyd, Semigloss, Low VOC Content.
UU-T-81	- Tags, Shipping and Stock.
VV-L-800	- Lubricating Oil, General Purpose, Preservative (Water-Displacing, Low Temperature).

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| MMM-A-179 | - Adhesive: Paper Label.               |
| PPP-B-601 | - Boxes, Wood, Cleated-Plywood.        |
| PPP-B-621 | - Boxes, Wood, Nailed and Lock-Corner. |

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|---------------|---|
| MIL-B-117     | - Bags, Sleeves and Tubing.   |
| MIL-B-121     | - Barrier Material, Greaseproofed, Waterproofed, Flexible.                        |
| MIL-C-450     | - Coating Compound, Bituminous Solvent Type, Black (for Ammunition).              |
| MIL-C-5501    | - Caps and Plugs, Protective, Dust and Moisture Seal, General Specification for.  |
| MIL-C-5501/7  | - Caps and Plugs, Protective, Dust and Moisture Seal (Cap-Plug, General Purpose). |
| MIL-PRF-10924 | - Grease, Automotive and Artillery.   |
| MIL-B-11188   | - Batteries, Storage: Lead-Acid, General Specification for (Metric).              |
| MIL-PRF-16173 | - Corrosion Preventive Compound, Solvent Cutback, Cold-Application.               |
| MIL-D-16791   | - Detergents, General Purpose (Liquid, Nonionic).                                 |
| MIL-L-21260   | - Lubricating Oil, Internal Combustion Engine, Preservative and Break-in.         |
| MIL-T-22085   | - Tapes, Pressure-Sensitive, Adhesive, Preservation and Sealing.                  |
| MIL-B-22191   | - Barrier Materials, Transparent, Flexible, Heat Sealable.                        |
| MIL-T-37402   | - Tester, Antifreeze Solutions.   |
| MIL-P-46002   | - Preservative Oil, Contact and Volatile Corrosion-Inhibited.                     |
| MIL-H-46170   | - Hydraulic Fluid, Rust Inhibited, Fire Resistant Synthetic Hydrocarbon Base.     |
| MIL-T-50036   | - Talc, Technical, T1 and T3.   |
| MIL-P-52905   | - Paint, Camouflage, Removable.   |
| MIL-A-53009   | - Additive, Antifreeze Extender, Liquid Cooling Systems.                          |
| MIL-D-81298   | - Dye, Liquid, for the Detection of Leaks in Aircraft Fuel Systems.               |

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### STANDARDS

#### DEPARTMENT OF DEFENSE

- MIL-STD-129 - Marking for Shipment and Storage.
- MIL-STD-2073-1 - Military Packaging, Standard Practice for.

(Unless otherwise indicated, copies of the above specifications and standards are available from the Standardization Document Order Desk, Bldg. 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.)

2.2.2 Other Government documents and drawings. The following other Government documents and drawings form a part of this specification to the extent specified herein. Unless otherwise specified, the issues are those cited in the solicitation.

#### DEPARTMENT OF TRANSPORTATION

##### Federal Motor Carrier Safety Regulations

(Application for copies should be addressed to the Department of Transportation, Bureau of Motor Carrier Safety, Washington, DC 20590.)

##### Hazardous Materials Regulations

(Application for copies should be addressed to the Department of Transportation, Hazardous Materials Regulations Board, Washington, DC 20590.)

### DRAWING

#### ARMY

- 12269239 - Closure Kit, Vehicle Protective.

(Copies of the above drawing are available from the U.S. Army Tank-automotive and Armaments Command, ATTN: AMSTA-TR-E/BLUE, Warren, MI 48397-5000.)

2.3 Non-Government publications. The following documents form a part of this specification to the extent specified herein. Unless otherwise specified, the issues of the documents which are DOD adopted are those listed in the issue of the DODISS cited in the solicitation. Unless otherwise specified, the issues of documents not listed in the DODISS are the issues of the documents cited in the solicitation (see 6.2).

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### AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

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|------------------|------------------------|
| ANSI/AHBA A135.4 | - Basic Hardboard.     |
| ANSI O1          | - Industry Wire Cloth. |

(Application for copies should be addressed to the American National Standards Institute, 11 West 42nd Street, New York, NY 10036.)

### AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

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|-------------------|--|
| ASTM A228/A228M   | - Standard Specification for Steel Wire, Music Spring Quality (DoD Adopted).                                 |
| ASTM D1974        | - Standard Practice for Methods of Closing, Sealing, and Reinforcing Fiberboard Boxes (DoD Adopted).         |
| ASTM D3953        | - Standard Specification for Strapping, Flat Steel and Seals (DoD Adopted).                                  |
| ASTM D5118/D5118M | - Standard Practice for Fabrication of Fiberboard Shipping Boxes (DoD Adopted).                              |
| ASTM D5330        | - Pressure Sensitive Tape for Packaging, Filament-Reinforced, Standard Specification for (DoD Adopted).      |
| ASTM D5486        | - Pressure Sensitive Tape for Packaging, Box Closure, and Sealing, Standard Specification for (DoD Adopted). |

(Application for copies should be addressed to the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.)

### ASSOCIATION OF AMERICAN RAILROADS PUBLICATIONS

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|---------------|---|
| Section No. 1 | - General Rules Governing Loading of Commodities on Open Top Cars.                |
| Section No. 6 | - Rules Governing the Loading of Department of Defense Material on Open Top Cars. |

(Application for copies should be addressed to the Association of American Railroads, 59 East Van Buren, Chicago, Illinois 60605.)

2.4 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

### 3. REQUIREMENTS

3.1 First article. When specified (see 6.2), a sample shall be subjected to the first article inspection in accordance with 4.2.

3.2 Materials. Materials shall be as specified herein and in referenced specifications and drawings. Materials shall be free from all defects and imperfections that might affect the serviceability and appearance of the finished product (see 4.4.1).

3.2.1 Recycled, recovered, or environmentally preferable materials. Recycled, recovered, or environmentally preferable materials should be used to the maximum extent possible provided that the material meets or exceeds the operational and maintenance requirements, and promotes economically advantageous life cycle costs (see 4.4.1 and 6.5.1).

3.3 Level A. When specified (see 6.2), level A processing shall be used to process vehicles.

3.3.1 Government furnished equipment (GFE). Unless previously accomplished, GFE (other than installed) shall be packaged, packed, and marked in accordance with the individual document for the specific item. GFE shall be stowed with basic issue items (BII).

3.3.2 Preservatives and atomized spray equipment. When atomized spraying of preservative oils is specified, compressed air supply lines shall be equipped with moisture separators every 15.2 meter (m) (50 feet (ft)) or fraction thereof.

3.3.3 Processing records. Records of vehicle processing shall be maintained and shall be readily available for review by Government representatives.

3.3.4 Disassembly. Projecting parts whose removal will accomplish desired cube reduction and parts susceptible to damage and pilferage shall be removed from the vehicle. Removed bolts, nuts, screws, pins and washers shall be placed in one of the mating parts and secured. Bare metal surfaces of removed parts shall be preserved, packaged, packed in accordance with MIL-STD-2073-1, identified and stowed securely with the vehicle.

3.3.4.1 Matchmarking. Parts removed from the vehicle shall be matchmarked when necessary to facilitate reassembly. Matchmarking information shall be put on cloth shipping tags conforming to type A of UU-T-81, or on metal tags using waterproofed ink or paint, and attached to mating parts. The marked cloth shipping tags shall be waterproofed with varnish conforming to A-A-1800 or adhesive conforming to MMM-A-179.

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3.3.5 Record forms. Two copies of DA Form 2258 shall be completed with information that includes preservation accomplished and depreservation instructions. The Equipment Log Book Binder and one copy of DA Form 2258 (see 6.4) shall be placed in a bag conforming to type I, class B, style 2, 0.15 millimeters (mm) (6 mil) of MIL-B-117; the bag shall be closed by heat sealing and securely attached in the driver's compartment of vehicle. The other copy of DA Form 2258 shall be waterproofed with adhesive conforming to MMM-A-179, or sealed in a plastic bag, and securely attached in a conspicuous location on the exterior of the vehicle.

### 3.3.6 Cleaning and drying (see 4.4.2.1).

3.3.6.1 Interior of vehicle. Interior surfaces of vehicle shall be cleaned with a solution of detergent conforming to P-D-220, or type I of MIL-D-16791, and water. Solution temperature shall not exceed 99 degrees Celsius (°C) (210 degrees Fahrenheit (°F)) and pressure shall not exceed 35 kilopascals (kPa) (5 pounds per square inch (psi)) measured 10 centimeters (cm) (4 inches (in.)) from the nozzle. After cleaning, the surfaces shall be rinsed with clean water and dried. Care shall be taken during cleaning and rinsing operations to assure that no solution or water enters instruments, connections, or other components susceptible to water damage. Solution or water shall not accumulate and remain in cavities that cannot be drained. Vehicles with decals, markers, straps, and floor plates installed shall only be hand cleaned with solution of P-D-220, or type I of MIL-D-16791, and water to prevent damage to these components. Cleaned surfaces shall be hand rinsed and dried.

3.3.6.1.1 Cleaning and drying of battery supports and retainers. Battery supports and retainers shall be cleaned with a solution of 60 grams (g) (0.5 pounds (lb)) of sodium bicarbonate conforming to A-A-374 per liter (L) (gallon (gal)) of water. After cleaning, the surfaces shall be flushed with clean water, then thoroughly dried. Dried surfaces shall then be preserved in accordance with 3.3.7.2.

3.3.6.1.2 Cleaning and drying of backrests and seats. The backrest and seat cushions shall be cleaned with a solution of detergent conforming to P-D-220, or type I of MIL-D-16791, in warm water. After cleaning, the cushions shall be wiped with cloths saturated with clean water to remove cleaning solution. Care shall be taken not to saturate the cushions with cleaning solution or water. After rinsing, the cushions shall be dried, then protected in accordance with 3.3.8.3.

3.3.6.2 Exterior of vehicle and weapon/targeting station. The exterior of vehicle and weapon/targeting station shall be cleaned using solution of detergent conforming to P-D-220, or type I of MIL-D-16791, in warm water or steam. Cleaning shall remove all foreign matter. After cleaning, the surfaces shall be rinsed with clean water or steam and thoroughly dried. Care shall be taken to avoid entry of water or steam into the driver's compartment, engine compartment or weapon/targeting station openings. Care shall be taken in the cleaning of the

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Image Transfer Assembly (ITA). Steam or high pressure water spray shall not be sprayed directly on any of the lenses. All exposed lenses shall be wiped clean and dry using lens tissue conforming to A-A-50177. Where possible, all lenses on the ITA shall have caps placed over them with lens tissue folded and placed inside of each cap. All caps shall be snug fitting and shall be secured in place with tape conforming to type IV of MIL-T-22085.

### 3.3.7 Preservation.

3.3.7.1 Relubrication. If the vehicle has been operated more than 120 kilometers (km) since lubrication, or after the vehicle has been cleaned in accordance with 3.3.6.2, the vehicle shall be relubricated using materials conforming to drawings, specifications or lubrication order applicable to the vehicle. All exposed oil can points such as, but not limited to, levers, locking levers, locking bars, locking pins, pintle pins, hinge pins, hinge strikers, wing nuts, door locks, hand-operated locking knobs, latches, linkage, and threaded ends of yokes and related clevis pins shall be coated with lubricant conforming to VV-L-800. Excess lubricant shall be removed after coating.

3.3.7.2 Preservation of battery supports and retainers. Top battery supports and retainers shall be preserved with compound conforming to MIL-C-450.

3.3.7.3 Transmission, transfer assembly, control differential, and final drives. The transmission shall contain lubricating oil conforming to grade 10 of MIL-L-21260 filled to operating level. The transfer assembly, control differential, and final drives shall contain lubricating oil conforming to grade 10 or 30, as annotated with type and grade of lubricant used (see 3.3.5).

3.3.7.4 Cooling system. As specified (see 6.2), the cooling system shall be protected by one of the following procedures (see 4.4.2.2):

- a. For shipment to, and storage in, areas where the temperature drops below minus 40°C (-40°F), systems shall be protected as specified in 3.3.7.4.3.
- b. For shipment and storage within the bounds of 30 degrees north latitude and 20 degrees south latitude, except continental United States, systems shall be protected as specified in 3.3.7.4.2.
- c. For all other shipments cooling systems shall be protected as specified in 3.3.7.4.1.

NOTE: DA Form 2258 (see 3.3.5) shall be completed to indicate coolant used.



3.3.7.4.1 Water and antifreeze procedure. The cooling system shall be filled to operating level with a clean solution consisting of equal parts by volume of antifreeze (ethylene glycol) conforming to A-A-52624 and water. The engine shall be operated until a temperature has been reached that causes the thermostat to open, to assure complete mixing and even distribution of the antifreeze solution. A warning tag, bearing the information "COOLING SYSTEM FILLED WITH WATER AND ANTIFREEZE SOLUTION (ETHYLENE GLYCOL) IN EQUAL PARTS BY VOLUME - DO NOT DRAIN", shall be securely attached to the radiator filler neck.

3.3.7.4.2 Water and corrosion inhibitor procedure. The cooling system shall be filled with clear water up to, but not including, the radiator upper tank. A corrosion inhibitor conforming to MIL-A-53009 shall be added in the proportion of 142 g (5 ounces (oz)) of the inhibitor for each 9.5 L (10 quarts (qt)) of water. The inhibitor shall be dissolved in 1.9 L (2 qt) of warm water and poured into the radiator while the engine is idling. More water shall be added, if necessary, to fill the radiator to operating level. A warning tag, bearing the information "COOLING SYSTEM DOES NOT CONTAIN ANTIFREEZE - FILLED WITH WATER AND INHIBITOR", shall be securely attached to the radiator filler neck.

3.3.7.4.3 Antifreeze compound procedure. The cooling system shall be filled to operating level with antifreeze compound conforming to A-A-52624. The compound shall be used without dilution. A warning tag, bearing the information "COOLING SYSTEM FILLED WITH ANTIFREEZE (ARCTIC-TYPE) - DO NOT DRAIN", shall be securely attached to the radiator filler neck.

3.3.7.5 Engine crankcase preservation. The crankcase shall be filled to operating level with lubricating oil conforming to MIL-L-21260 of the seasonal grade specified in the applicable drawing, specification, or lubrication order. DA Form 2258 shall be annotated with type and grade of lubricant used.

3.3.7.6 Compression ignition engine. Compression ignition engine preservation shall be in accordance with 3.3.7.6.1 through 3.3.7.6.5 in an uninterrupted sequence and the following two exceptions:

- a. Engines without turbochargers, process per all paragraphs with the exception of 3.3.7.6.4.
- b. Engines with turbochargers, process per all paragraphs with the exception of 3.3.7.6.3.

3.3.7.6.1 Initial conditions. Prior to processing, engine shall be cooled to assure that the cylinder head temperature, measured at the injector nozzle flange surface of all cylinders, is not more than 38°C (100°F). Cooling shall be accomplished by induced air currents, circulation of engine coolant, or by waiting the period of time required to arrive at the above specified

temperature. When the ambient temperature exceeds 38°C (100°F), the engine shall be cooled to ambient temperature (see 4.4.2.4).

3.3.7.6.2 Fuel system and combustion chamber preservation. A portable auxiliary container with a filtering device and regulator valve shall be filled with preservative oil conforming to grade 1 of MIL-P-46002 to which has been added an oil-soluble red dye conforming to MIL-D-81298, in a concentration sufficient to impart a marked coloring to the oil. The following procedure shall be followed:

- a. Position container to allow gravity feed to the engine. Shut off fuel supply system from the fuel tank. Disconnect the engine fuel supply line at the inlet quick disconnect. Connect this line to the auxiliary container containing preservative oil.
- b. Disconnect vehicle fuel return line at quick disconnect coupling. Connect a transparent plastic fuel line to the engine end of the disconnected fuel return line. Place the other end of transparent fuel line into a recovery container to collect the return oil.
- c. Disconnect the air cleaner hose between the air cleaner and engine intake at the air cleaner outlet. Place an air restrictor boot over the engine intake to completely shut off the supply of air to the engine. (The air restrictor boot shown in figure 1 has proven satisfactory for engine preservation.)
- d. Place the engine shut off handle to the "ON" position. Open throttle fully. Open the regulator valve on the auxiliary container. Crank the engine with the starter (NOTE: Engine may fire for approximately 5 seconds) for not less than 30 seconds and not greater than 45 seconds until the red-colored preservative oil appears in the fuel return line. If the preservative oil is not observed within the 30- to 45-second period, rest the starter for a period of 3 minutes and repeat the cranking procedure.

**CAUTION:** Special precautions shall be taken to assure that the time limits specified are not exceeded. Damage to the starter solenoid or hydrostatic lock may result.

Close the regulator valve on the auxiliary container. Disconnect the engine fuel supply line from the auxiliary container and reconnect it to the inlet quick disconnect coupling. Remove the transparent fuel line, and reconnect the vehicle fuel return line at the quick disconnect coupling. Turn on the vehicle fuel supply system. Remove the air restrictor boot and reinstall the hose to the air cleaner (see 4.4.2.4).

3.3.7.6.3 Preservation through air intake and exhaust system, without turbocharger. Atomize 29 g (1 oz) of preservative oil conforming to grade 1 of MIL-P-46002 into the exhaust opening. Seal the opening with tape conforming to type IV of MIL-T-22085. Disconnect the hose at the air intake and atomize 29 g (1 oz) of preservative oil conforming to grade 1 of

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MIL-P-46002 into the intake manifold. Seal the opening with tape conforming to type IV of MIL-T-22085 (see 4.4.2.4).

### 3.3.7.6.4 Preservation through air intake and exhaust system, with turbocharger.

Atomize 29 g (1 oz) of preservative oil conforming to grade 1 of MIL-P-46002 into the external exhaust opening. Seal the opening with tape conforming to type IV of MIL-T-22085. Remove the exhaust tube between the turbocharger and left exhaust manifold. Atomize 29 g (1 oz) of preservative oil conforming to grade 1 of MIL-P-46002 into the left exhaust manifold. Then atomize 57 g (2 oz) of grade 1 of MIL-P-46002 into the right exhaust manifold and the bottom of turbocharger through the left opening in the bottom of turbocharger. Replace the left exhaust tube. Disconnect the air cleaner hose at the turbocharger inlet, and atomize 29 g (1 oz) of grade 1 of MIL-P-46002 into the turbocharger. Seal the opening with tape conforming to type IV of MIL-T-22085 (see 4.4.2.4).

3.3.7.6.5 Preservation through oil level gage rod opening. Remove the oil level gage rod and atomize 170 g (6 oz) of preservation oil conforming to grade 1 of MIL-P-46002 into the crankcase through the gage rod opening. An extension of sufficient length to permit the nozzle to be within the crankcase (but not submerged in the crankcase oil) shall be used. Reinstall the gage rod. All openings to engine interior, oil gage rod, oil filter cap, and crankcase breathers shall be sealed with tape conforming to type IV of MIL-T-22085.

### WARNING TAG:

A red warning tag, bearing the information "ENGINE PRESERVED WITH VCI - DO NOT CRANK" and "BEFORE CRANKING, REMOVE TAPE FROM ALL SEALED AREAS (EXHAUST, AIR INTAKE or TURBOCHARGER INLET, OIL GAGE ROD, OIL FILLER CAP AND CRANKCASE BREATHERS)" shall be placed in a conspicuous location within the driver's compartment.

DA Form 2258 shall be annotated to show the engine is preserved with grade 1 of MIL-P-46002 (see 4.4.2.4).

3.3.7.6.6 Preservation through flywheel housing. Fifty-seven grams (2 oz) of preservative oil conforming to grade 1 of MIL-P-46002 shall be atomized into the flywheel housing (see 4.4.2.4).

3.3.7.7 Personnel and engine compartment heaters and lines. Personnel and engine heaters shall have the fuel supply shut off valve, located at the inlet side of fuel filters, turned to the "off" position. The main fuel line supplying fuel to the heaters shall be disconnected at a point closest to shut off valves. Fuel from the fuel lines shall be allowed to drain. Ends of disconnected fuel lines and shut off valves shall be sealed with plastic plugs/caps conforming to

MIL-C-5501. The external exhaust stack shall have the opening sealed with tape conforming to type II of MIL-T-22085. A plastic plug/cap conforming to MIL-C-5501 may be used. Four warning tags, each bearing the information "HEATER FUEL LINES DISCONNECTED AND SEALED. PRIOR TO PLACING PERSONNEL OR ENGINE HEATERS IN OPERATION, REMOVE PLUGS/CAPS OR TAPE FROM FUEL LINES, EXHAUST STACK AND SHUT OFF VALVES. OPERATE HEATER FUEL PUMP AND DRAIN A MINIMUM OF 950 MILLILITERS (1 QUART) OF FUEL THROUGH THE FUEL LINES INTO A PORTABLE CONTAINER. RECONNECT HEATER FUEL LINES.", shall be prepared. One tag each shall be secured to the personnel and engine heater operating switches and one each to the personnel and engine heaters.

3.3.7.8 Fuel tank preservation. The fuel tank(s) shall be drained to the maximum extent possible. The fuel tank cap(s) and filler screen(s) shall be removed and coated with lubricating oil conforming to grade 30 of MIL-L-21260. The contractor shall maintain a written procedure used to ascertain the amount of residual fuel. The tank cap(s) and filler screen(s) shall be reinstalled (see 4.4.2.3).

3.3.7.8.1 Fuel tank security. After processing the fuel tank(s) as specified in 3.3.7.8, the armored fuel cap shall be secured with the combat lock(s).

3.3.7.9 Ramp lift assembly. All unpainted metal surfaces of the ramp lift assembly, excluding cylinder rod, shall be coated with preservative conforming to grade 4 of MIL-PRF-16173.

3.3.7.9.1 Ramp hydraulic reservoir. The ramp hydraulic reservoir shall be filled with hydraulic fluid conforming to type I of MIL-A-46170.

3.3.7.10 Weapon/targeting station hydraulic system. The weapon/targeting station hydraulic system shall contain operational lubricant as specified on the applicable drawings, specifications, or lubrication order, filled to operating level.

3.3.7.11 Machine gun pintle mount. The machine gun pintle mount shall be removed and mounting bolts and washers reinstalled. Bare metal surfaces of the pintle shall be preserved with grease conforming to MIL-PRF-10924 and wrapped with barrier material conforming to type II, grade A, class 2 of MIL-B-121. The wrap shall be secured with tape conforming to type IV of ASTM D5486. The preserved mount shall be identified and securely stowed within the vehicle.

3.3.7.12 Hatches and doors. Rubber seals around hatches and doors shall be coated with powdered talc conforming to type IV, class C of A-A-52518 or talc, technical, MIL-T-50036. For shipment, hatches and doors shall be closed and locked from the inside, except the driver's hatch. The driver's hatch shall be closed and secured from the outside with a bolt having a nut

drawn up tight and exposed threads peened over to prevent easy removal, or a bolt having a nut drawn up tight with the nut tack welded to the bolt, or with a Government-issued padlock. For storage, hatches and doors shall be locked from the inside, except that the ramp door shall be secured in the open position for ventilation.

### 3.3.7.13 Ventilation.

3.3.7.13.1 Engine compartment access plate, gasket, and drain plugs. The engine compartment access plate, gasket, and attaching hardware shall be removed for ventilation. A screen conforming to figure 2 shall be installed in access plate opening, and secured with four of the existing mounting screws and washers. The two forward MS drain plugs and the rear bilge drain plug shall be removed for drainage. A screen conforming to figure 3 shall be installed in rear bilge opening, and held in place with retainer spring conforming to figure 4. Bare metal surfaces of drain plugs shall be preserved with compound conforming to grade 4 of MIL-PRF-16173. The plate, gasket, and preserved drain plugs shall be packaged as specified in 3.3.8.10.

The information "REMOVE SCREEN, INSTALL ACCESS PLATE AND GASKET, FRONT AND REAR DRAIN PLUGS BEFORE VEHICLE OPERATION" shall be stenciled on the exterior of the vehicle using white or yellow paint conforming to MIL-P-52905. Stenciling shall be in characters not less than 19 mm (0.75 in.) high.

3.3.7.13.2 Engine compartment access panels. One engine compartment panel in the crew compartment shall be removed, and stowed securely in the crew compartment. A warning tag, bearing the information "ENGINE COMPARTMENT PANEL REMOVED: LOWER RAMP OR OPEN HATCHES WHEN OPERATING ENGINE", shall be attached in a conspicuous location within the driver's compartment.

3.3.7.14 Miscellaneous preservation. Except as otherwise specified herein, all exposed, unpainted, metal surfaces on the exterior of the vehicle, except the track shoes, shall be coated with compound conforming to grade 1 of MIL-PRF-16173. All exposed, unpainted, unplated, metal surfaces on the interior of the vehicle shall be coated with compound conforming to grade 4 of MIL-PRF-16173.

### 3.3.8 Packaging.

3.3.8.1 Dry charged batteries and cables. Dry charged batteries shall be installed and secured in the vehicle battery carrier. Battery cables shall be secured to the battery carrier with 19 mm (0.75 in.) tape conforming to type I of ASTM D5330. Battery filler cap openings shall be sealed by placing a 51 mm (2 in.) wide by 0.08 mm (3 mil) thick piece of film conforming to type II of MIL-B-22191 over each filler cap opening with the cap removed. The sheet shall be of

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sufficient length to allow it to be depressed into the opening to the same depth as the filler plug. Filler caps shall be screwed or inserted into openings to form a complete seal without damaging the sheet. If batteries have been processed in accordance with MIL-B-11188, they need not be reprocessed as above.

3.3.8.2 Electrolyte. Electrolyte shall be packaged and packed in accordance with O-S-801, except that the exterior container shall conform to PPP-B-621, class 2, or PPP-B-601, overseas type. Marking shall conform to O-S-801. The packed electrolyte shall be stowed in the same location as the BII and secured independently to permit separate removal.

3.3.8.3 Packaging of backrests and seats. Cushions of backrests and seats (see 3.3.6.1.2) shall be covered with paper conforming to A-A-203 with a basic weight of not less than 60 lb. The paper shall be secured with tape conforming to type I of A-A-883.

3.3.8.4 Squad leader's panoramic telescope. The panoramic telescope shall be removed from the vehicle. Telescope shall be immediately packaged in accordance with the level A requirements of MIL-STD-2073-1. Packaged item shall be stowed within the personnel compartment. The opening shall be covered with a hardboard cover (see figure 5a and figure 6). Cover shall be secured in place with tape conforming to type IV of MIL-T-22085.

3.3.8.5 PLRS antenna and radio antenna(s). PLRS antenna and radio antenna(s) shall be removed from vehicle. Antennas shall be cushion wrapped with material conforming to A-A-1898 and placed into fiberboard containers conforming to ASTM D5118. Containers shall be closed in accordance with ASTM D1974 and stowed within the personnel compartment. The opening for the PLRS antenna shall be covered with a hardboard cover (see figure 5b and figure 6). Cover shall be secured in place with tape conforming to type IV of MIL-T-22085.

3.3.8.6 Periscope(s) and vision block(s). Periscope(s) and vision block(s) shall be covered with hardboard covers (see figure 5 for hardboard sizes and figure 6 for location of covers). Covers shall be secured in place with tape conforming to type IV of MIL-T-22085.

3.3.8.7 Weapon/targeting station, M901A1 and M981. Hardboard covers shall be used to close openings on the weapon and targeting station (see figure 7 for placement of covers). Covers shall be secured in place with tape conforming to type IV of MIL-T-22085.

3.3.8.8 Fire extinguishers. Fire extinguishers shall contain 90 percent of rated full charge. All seals shall be intact (see 6.3).

3.3.8.9 BII and COEI, M901A3, M981A3. Unless otherwise specified (see 6.2), BII and components of end item (COEI) items shall be processed, packed, and stored as follows. If BII and COEI items are not furnished as a GFE item, BII and COEI items shall then be processed in

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accordance with tables I, II, III, and IV. Methods of preservation as called out on these tables shall be in accordance with MIL-STD-2073-1. Packing of items shall conform to the requirements of MIL-STD-2073-1. Stowage and securement of BII and COEI items shall be in accordance with 3.3.8.9.1.

3.3.8.9.1 Stowage and securement of BII and COEI. BII, COEI and items that have been removed from vehicle for shipment shall be identified to the pertinent vehicle by serial number. (NOTE: If vehicle has been rebuilt or revised at depot, BII, COEI and items that have been removed for shipment shall not be identified to the pertinent vehicle by serial number). BII and COEI shall be stored inside buildings, except during shipment. Packed BII, COEI and removed exterior vehicle items shall be placed within the personnel compartment of the vehicle.

(NOTE: It may be required to unsecure various items within vehicle personnel compartment to facilitate securing of BII and COEI items. Any item removed or unsecured shall be properly identified and secured within compartment in a safe manner).

Large wooden boxes shall be placed on the vehicle floor and shall be secured with 31.75 mm (1.25 in.) wide strapping conforming to type I, heavy-duty, finish A of ASTM D3953.

(NOTE: If BII, COEI and other containers are placed in fiberboard container and it has been determined 31.75 mm (1.25 in.) wide strapping will cause damage to containers, strapping width shall be reduced to 19.05 mm (0.75 in.) wide.)

Strapping shall be secured to holding devices within the compartment. Additional strapping may be required if 19.05 mm (0.75 in.) wide strapping is used. All containers shall be secured in such a manner as to prevent any movement during transit and to prevent damage to containers or vehicle interiors. Corner protectors shall be used under all strapping.

3.3.8.10 Engine compartment access plate, gasket, and drain plugs. The engine compartment access plate, gasket, and preserved drain plugs (see 3.3.7.13.1) shall be packaged in a box conforming to type CF, class Weather-Resistant of ASTM D5118. The box shall be closed in accordance with ASTM D1974 using tape conforming to type I, class 1 of ASTM D5486, identified as to contents, and securely stowed within the personnel compartment.

3.3.8.11 Packaging of tow hooks. Tow hooks and related hardware shall be removed for shipment and packaged in a type CF, class Weather-Resistant box conforming to ASTM D5118. The box shall be closed in accordance with ASTM D1974 using tape conforming to type I, class 1 of ASTM D5486, identified as to contents, and securely stowed within the personnel compartment.

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### 3.3.9 Vehicle closure.

3.3.9.1 Vehicle closure kit. If specified (see 6.2), each vehicle shall be provided with a vehicle protective closure kit. The closure kit shall be fabricated, assembled, and installed in accordance with Drawing 12269239.

3.3.9.1.1 COEI box marking. If it is ascertained that the COEI container will accommodate the closure kit, box shall be marked as follows: "DO NOT DESTROY - USE FOR RETURN SHIPMENT OF VEHICLE CLOSURE KIT". Letter shall be 19 mm (0.75 in.) high in a contrasting color of enamel conforming to TT-E-529.

3.4 Level B. When level B processing is specified (see 6.2), vehicles shall be processed in the same manner as specified for level A, with the following exceptions.

3.4.1 Transmission, transfer assembly, control differential, and final drives. The transmission, transfer assembly, control differential, and final drives shall contain operational lubrication as specified on applicable drawings, specifications, or lubrication order, filled to operating level. If, however, these units contain lubricating oil conforming to type I, grade 10 or 30 of MIL-L-21260, an additional amount of the same oil shall be added to attain operating level. Operating lubricants shall not be mixed with MIL-L-21260 except in an emergency. An additional amount of the same oil shall be added to attain operating level. DA Form 2258 shall be annotated to indicate the grade of operational lubricant or preservative oil used.

3.4.2 Engine crankcase. The engine crankcase shall contain normal operational lubricant as specified in the lubrication order, filled to operational level. DA Form 2258 shall be annotated to indicate the grade of lubricant used.

3.4.3 Engine preservation. The engine shall require no preservation for level B shipment and storage.

3.4.4 Personnel heater and fuel pump. The personnel heater and fuel pump shall be in ready-to-use condition. The heater exhaust opening shall be closed with a plastic plug conforming to MIL-C-5501/7 (see figure 6), or closed with tape conforming to type IV of MIL-T-22085. A warning tag, bearing the information "HEATER EXHAUST OPENINGS CLOSED, REMOVE PLUG OR TAPE BEFORE OPERATING", shall be attached to the heater controls.

3.4.5 Residual fuel. Unless otherwise specified (see 6.2), the vehicle shall be shipped without draining residual fuel from the fuel tank.



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3.4.6 Backrests and seats. Cushions of backrests and seats shall not be covered. If cushions are received packaged, they shall be stowed as received in the crew compartment.

3.4.7 Vehicle closure kit. Vehicle closure kit shall not be provided for level B shipment and storage.

3.4.8 Tow hooks. Tow hooks shall be removed for overseas shipment only (see 3.3.8.11).

3.4.9 Engine compartment access panels. Engine compartment access panels in the crew compartment shall not be removed.

3.4.10 Bilge pump outlets. Bilge pump outlets shall be closed with plastic plugs conforming to MIL-C-5501/7 (see figure 6), or closed with tape conforming to type IV of MIL-T-22085. A warning tag, bearing the information "BILGE PUMP OUTLETS CLOSED. PRIOR TO OPERATING BILGE PUMP, REMOVE PLUGS OR TAPE FROM OUTLETS", shall be secured to the bilge pump operating switch.

3.5 Height reduction for transportation. Unless otherwise specified (see 6.2), the launcher or targeting head shall be placed in the transport configuration position in accordance with Appendix A.

### 3.6 Loading.

3.6.1 Loading flat cars. Loading of vehicles on open top railroad cars shall be in accordance with the applicable requirements of section 1, "General Rules Governing the Loading of Commodities on Open Top Cars", and figure 87 or 87A, section 6, "Rules Governing the Loading of Department of Defense Material on Open Top Cars", publications of the Association of American Railroads.

3.6.2 Highway shipment. Loading of vehicles for shipment by haulaway and rules for shipment by driveaway or towaway shall be in accordance with Interstate Commerce Commission publication, "Federal Motor Carrier Safety Regulations", and applicable military publications.

### 3.6.3 Reprocessing engine after loading.

3.6.3.1 Level A. If the engine is operated in connection with the moving of vehicle to the loading area or during the loading itself, the engine shall be reprocessed as specified in 3.3.7.6 through 3.3.7.6.5. The vehicle cover shall be rolled clear of the engine intake and exhaust

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to provide air circulation and to prevent damage to the cover. After reprocessing of engine, the vehicle cover shall be replaced in its original position.

3.6.3.2 Level B. If the engine is operated in connection with movement of vehicle for loading or unloading, there shall be no additional processing of engine.

3.7 Marking. In addition to any special marking required in the contract (see 6.2), the vehicle shall be marked in accordance with MIL-STD-129.

3.7.1 Lifting points. The information "LIFT HERE" with an arrow pointing to the lifting eye shall be stenciled adjacent to each lifting eye using black ink conforming to A-A-208.

3.8 Drive-on/drive-off capability. When the vehicle is to be operated for loading or unloading (see 6.2), the following provisions shall apply:

3.8.1 Additional fuel. When specified (see 6.2), additional fuel shall be added, as required, to accomplish movement of the vehicle.

3.8.2 Batteries and electrolyte. Battery shall be filled with electrolyte and fully charged, and battery cables shall be connected to the battery. After vehicle self-movement for loading or placement in storage, the ground cable at the battery shall be disconnected and then secured to the battery carrier with 19 mm (0.75 in.) tape conforming to type IV of ASTM D5486. A warning tag, bearing the information "VEHICLE PRESERVED FOR DRIVE-AWAY CONDITION. BEFORE CRANKING, CONNECT GROUND CABLE TO BATTERY TERMINAL. ENGINE AND FUEL TANKS NOT PRESERVED," shall be attached in a conspicuous location within the driver's compartment.

## 4. VERIFICATION

4.1 Classification of inspections. The inspection requirements specified herein are classified as follows:

- a. First article inspection (see 4.2).
- b. Conformance inspection (see 4.3).

4.2 First article inspection. Unless otherwise specified (see 6.2), one of the first 10 production processed vehicles shall be subjected to the inspections specified in 4.4 (see 3.1).

4.3 Production processed vehicles. Unless otherwise specified (see 6.2), all production processed vehicles shall be subjected to the inspections specified in table V and 4.4.2.1 through 4.4.2.3.

#### 4.4 Conformance inspections.

4.4.1 Materials. Except for materials that have been inspected by the Government at source, all materials to be used in processing of vehicles shall be inspected in accordance with the material specification; or certified inspection and laboratory test reports shall be provided which show that furnished materials conform to the applicable material specification. When materials are listed on a Qualified Products List, they shall be obtained from one of the approved sources indicated.

4.4.2 Processing. Except as otherwise specified herein, vehicle processing shall be inspected to determine conformance to this purchase description. Inspection of processing shall include all items specified in table V and 4.4.2.1 through 4.4.2.4.

4.4.2.1 Cleaning. To determine conformance to 3.3.6.1, the interior of vehicle shall be examined for cleanliness. One vehicle each day shall be tested for cleanliness in accordance with the applicable provisions of MIL-P-116. To determine conformance with 3.3.6.2, the exterior of vehicle shall be examined for cleanliness. Surfaces on which tape is to be applied shall be examined for cleanliness before application.

4.4.2.2 Cooling system. To determine conformance to 3.3.7.4, one processed vehicle shall be selected at random from each day's production. The engine coolant shall be tested using a hydrometer-thermometer type tester, with a range of minus 51 to plus 71°C, conforming to MIL-T-37402.

4.4.2.3 Fuel tank. To determine conformance to 3.3.7.8, visual inspection of preservative application shall be accomplished.

4.4.2.4 Engine. To determine conformance to 3.3.7.6.1 through 3.3.7.6.6, the interior of engine from 1 of the first 10 production processed vehicles shall be examined for surface coverage. The engine shall be disassembled to the extent necessary to permit visual examination of all surfaces within the combustion chamber. (NOTE: The combustion chamber shall be considered as all surfaces within the cylinder, from and including the crown of the piston, to and including the surfaces of the head within the cylinder. All surfaces within the combustion chamber shall have a "wet" coating of preservative oil such as is obtained when the item is dipped or flushed with the oil.)

#### 5. PACKAGING

This section is not applicable to this specification.

## 6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. Vehicle processing covered by this purchase description is intended to protect the vehicles for storage outside of buildings, for immediate use shipment, and for domestic or overseas shipment, including carloading.

6.2 Acquisition requirements. Acquisition documents must specify the following:

- a. Title, number, and date of this purchase description.
- b. Issues of DoDISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.2.1).
- c. If first article inspection is required (see 3.1).
- d. Applicable level of processing (see 3.3 and 3.4).
- e. Applicable procedure for protection of cooling system (see 3.3.7.4).
- f. If BII and COEI should be processed, packed, or stored other than as specified (see 3.3.8.9).
- g. If vehicle closure kit is required (see 3.3.9.1).
- h. If residual fuel should be drained from the fuel tank prior to shipping (see 3.4.5).
- i. If launcher or targeting head transport configuration should be other than as specified (see 3.5).
- j. If special marking is required (see 3.7).
- k. If vehicle drive-on and drive-off capability is required (see 3.8).
- l. If additional fuel should be supplied (see 3.8.1).
- m. If first article sample size should be other than as specified (see 4.2).
- n. If production processed vehicles should be subjected to inspections other than as specified (see 4.3).

6.3 Safety precautions. Caution should be exercised in handling carbon dioxide (CO<sub>2</sub>) fire extinguisher cylinders. Cylinders should not be dropped, permitted to strike each other, or handled roughly. Extreme care should be exercised during the reinstallation operation to avoid tripping the fire extinguisher control trigger (see 3.3.8.8).

6.4 Forms. A copy of the "Equipment Log Book" and all required forms (see 3.3.5) will be furnished to the contractor by the Government at least 30 days before shipment of the vehicles required by the contract delivery schedule.

6.5 Definitions.

6.5.1 Recovered materials. "Recovered materials" means materials that have been collected or recovered from solid waste (see 6.5.2).

6.5.2 Solid waste. "Solid waste" means (a) any garbage, refuse, or sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility; and (b) other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities. It does not include solid or dissolved material in domestic sewage, or solid or dissolved material in irrigation return flows or industrial discharges which are point sources subject to permits under section 402 of the Clean Water Act, (33 U.S.C. 1342 et seq.), or source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 U.S.C. 2011 et seq.) (Source: Federal Acquisition Regulations, section 23.402).

6.6 Subject term (key word) listing.

Government furnished equipment  
Hatches and doors  
Loading  
Preservatives and atomized spray equipment  
Ramp winch assembly  
Relubrication  
Vehicle closure  
Ventilation

6.7 Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

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TABLE I. Preservation methods of basic issue items (BII) for M901A1 and M901A3.

Identification number	Item description	Qty	Preservation method
5120-01-041-4624	Fixture, Track Connecting Track Shoe (12253183)	2	20
5120-01-041-9920	Gage, Track And Sprocket (12253280)	1	31
5120-01-006-8847	Punch, Drive Pin (Track Pin Removal) (11678718)	1	20
5340-01-276-9852	Handle, Crank (Launcher Manual Erection) (12327975)	1	31
2540-00-670-2549	Bag, Pamphlet, Canvas (Green) (7961712) Or Bag, Pamphlet, Canvas (Tan) (7961712-1) Or Bag, Pamphlet, Canvas (White) (7961712-2)	1	10
5140-00-473-6256	Bag, Tool, Satchel (11655979)	1	10
7240-00-242-6153	Can, Water, 5 Gallon Steel (11655980)	1	10
5110-00-595-8229	Cutter, Wire, M1938 (11655981)	1	31
4930-00-288-1511	Extension, Grease Gun Flex, 12" Lg Lube Access (6300333)	1	31
6545-00-922-1200	First Aid Kit, Motor Vehicle, 12 Unit (11677011)	1	32
4930-01-022-4876	Grease Gun, Hand, High Pressure, 15 Oz (10915142)	1	20
5340-00-158-3805	Padlock, Key Operated W/2 Keys (MS35647-10)	1	31
4010-00-767-3149	Cable, Tow, Stl. 10 Ft. Lg. (10861718)	1	20
4030-01-369-7612	Shackle (12381884)	2	20
2510-01-105-0779	Cover, Grille, Engine (12269299)	1	10
4210-00-270-4512	Extinguisher, Fire, Port. 5 Lbs. (7714780) Or	1	10
4210-01-107-9912	Extinguisher, Fire, Port. 5 Lbs. (7359703)		
7510-00-889-3494	Binder, Loose Leaf, 3 Ring (For Operator's Manual) (11677003)	1	10
7510-01-065-0166	Folder, Equipment Record (43986-1)	1	10
L09-2350-259-12	Lubrication Order, M901A1 Turret & Chassis	1	10
TM9-2350-259-10	Technical Manual, Operators M901A1 Turret	1	10

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TABLE I. Preservation methods of basic issue items (BII) for M901A1 and M901A3  
- Continued.

Identification number	Item description	Qty	Preservation method
TM9-2350-277-10	Technical Manual, Operators Chassis	1	10
LO9-2350-277-12	Lubrication Order, M113a3 Fov M901A3/M981A3 Chassis	1	10
1240-00-768-8707	Head, Periscope (For M19 Periscope) (7688707)	1	as applicable
5120-00-227-8074	Bar, Extension, 2" Drive, 10" Lg (MS16243-10)	1	31
5120-00-061-8546	Hammer, Hand, Ball-Peen, 2 Lb (11677028-3)	1	20
5120-00-236-7590	Handle, Socket Wrench, Hinged, 2" Drive (11655786-1)	1	31
4930-00-200-1841	Coupling Grease Gun (MS24203-1)	1	31
5120-01-119-4173	Pliers, Linemans W/Side Cutter, 8 Inches (11655790)	1	31
5120-00-223-7397	Pliers, Slip Joints, Straight Nose Combination, W/Cutter Thin Size 8 Inches (11655775-3)	1	31
5120-00-240-8716	Screwdriver, Cross Tip, #1 (Ms15224-4)	1	31
5120-00-234-8913	Screwdriver, Cross Tip, #2 (Ms15224-5)	1	31
5120-00-234-8912	Screwdriver, Cross Tip, #3 (11655777-9)	1	31
5120-00-278-1283	Screwdriver, Flat Tip, Common (11655777-11)	1	31
5120-00-189-7932	Socket, 2" Drive (12 Pt) 9/16" Opening (11677025-1)	1	31
5120-00-189-7934	Socket, 2" Drive (12 Pt) 7/8" Opening (11677025-5)	1	31
5120-00-189-7935	Socket, 2" Drive (12 Pt) 15/16" Opening (11677025-6)	1	31
5120-00-264-3796	Wrench, Adjustable, 1-5/16" Jaw Opening, Size 12 Inches (11655778-5)	1	31
5120-00-277-2342	Wrench, Engineer's Open End Doublehead, 3/8" & 7/16" Openings, 4" Long (11655789-1)	1	31

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TABLE I. Preservation methods of basic issue items (BII) for M901A1 and M901A3  
- Continued.

Identification Number	Item Description	Qty	Preservation Method
5120-00-187-7126	Wrench, Engineer's Open End Doublehead, 9/16" & 5/8" Openings, 6" Long (11655789-2)	1	31
5120-00-277-8300	Wrench, Engineer's Open End Doublehead, 11/16" & 13/16" Openings 7 2" Long (11655789-3)	1	31
5120-00-293-2336	Axe, Single Bit, 4 Lbs., 36" Long (6150925)	1	10
5120-00-288-6574	Handle, Mattock Pick (11677021)	1	10
5120-00-243-2395	Pick, Mattock (11677022)	1	10
5120-00-293-3336	Shovel, Round Point, D-Handle Open Back (11655784)	1	10
5120-00-240-6040	Crow Bar, Pinch, 1" Wide, 48" Long (11677049)	1	20
4930-00-169-8275	Oiler Hand Pump Type (6169931)	1	20
5120-00-144-5207	Adapter, Socket Wrench 3/4" Male X 2" Female (11655788-3)	1	31

TABLE II. Preservation methods of components of end item (COEI) for M901A1 and M901A3.

Identification number	Item description	Qty	Preservation method
2590-00-898-6771	Cover, Periscope (On Periscope, M17) (19207) 10866115	5	32
2540-00-679-8035	Hook, Tow (On Rear Slope) (19207) 10861607	2	10
1005-01-050-2105	Mount, Machine Gun Arm Assembly (Gunner's Station) (19207) 12266287	1	32
6550-00-704-3549	Periscope, M17 (In Driver's Station) (19207) 7043549	5	as applicable
1240-01-005-6035	Periscope, M19a1 (On Wall Left Of Driver) (19200) 11747126	1	52
5315-00-598-5808	Pin, Lock, Tow Cable (On Tow Hook) (19207) 7752865	2	31
5315-00-862-2683	Pin, Straight, Tow Cable (On Tow Hook) (19207) 10890323	2	10



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TABLE II. Preservation methods of basic issue items (BII) for M901A1 and M901A3  
- Continued.

Identification Number	Item Description	Qty	Preservation Method
6650-00-768-8875	Periscope, T25 (One On Top Deck, Left Side) (One On Top Deck Right Side) (19200) 7688875	2	as applicable
6650-01-370-3675	Or Periscope, M26 (19207) 12357850		

TABLE III. Preservation methods of basic issue items (BII) for M981 - M981A3.

Identification number	Item description	Qty	Preservation method
5120-00-240-6040	Crow Bar, Pinch, 1" Wide, 48" Long (11677049)	1	20
5120-01-041-4624	Fixture, Track Connecting (12253183)	2	20
5120-01-041-9920	Gage, Track Bushing Wear (12253280)	1	31
5120-01-006-8847	Punch, Drive Pin (11678718)	1	20
2540-00-670-2549	Bag, Pamphlet, Canvas (Green) (7961712) Or Bag, Pamphlet, Canvas (Tan) (7961712-1) Or Bag, Pamphlet, Canvas (White) (7961712-2)	1	10
5140-00-473-6256	Bag, Tool (11655979) Coupling, Grease Gun (MS24203-1)	1	10
4930-00-200-1841	Cutter, Barbed Wire, Insulated	1	31
5110-00-595-8229	Handles, Hand-Operated (11655981)	1	31
4030-01-369-7612	Shackle (12381884)	2	20
4930-00-288-1511	Extension, Adapter, Lube Access (6300333)	1	31
4210-00-270-4512	Fire Extinguisher (7714780) Or	1	10
4210-01-107-9912	Fire Extinguisher (7359703)		
6545-00-922-1200	First Aid Kit, Motor Vehicle 12 Unit (11677011)	1	32

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TABLE III. Preservation methods of basic issue items (BII) for M981 - M981A3  
- Continued.

Identification number	Item description	Qty	Preservation method
4930-01-022-4876	Grease Gun, Hand, High Pressure Lever Operated, 15 Oz (10915142) Handle, Crank (12327975)	1	20
5340-01-276-9852	Oiler, Hand, Pump (6169931)	1	31
4930-00-169-8275	Padlock, Key Operated, 1 2" Keyed Indv. W/2 Keys (MS35647-10)	1	20
5340-00-158-3805	Towing Cable (10861718)	1	31
4010-00-767-3149	Can, Water, Military, 5 Gal, Steel (11655980)	1	20
7240-00-242-6153	Hammer, Hand, Ball Peen, 2 Lb. (11677028-3)	1	10
5120-00-061-8546	Adapter, Socket Wrench, 3/4" Male, X 2" Female (11655788-3)	1	20
5120-00-144-5207	Key, Socket Head Scr (A05522011)	1	31
5120-00-240-5300	Key, Socket Head Scr (9191414)	1	31
5120-00-198-5413	Bar Extension, 2" Drive 10" Long (11655788-1)	1	31
5120-00-277-8074	Handle, Socket Wrench, Hinged, 2" Drive (11655786-1)	1	31
5120-00-236-7590	Key, Socket Head Scr (Ggg-K-275)	1	31
5120-00-198-5390	Pliers, Linemans W/Side Cutter Size 8 Inches (11655790)	1	31
5120-01-119-4173	Pliers, Slip Joint, Straight Nose	1	31
5120-00-223-7397	Combination, W/Cutter, Thin Size 8" (11655775-3)	1	31
5120-00-234-8913	Screwdriver, Cross Tip #2 (11655777-12)	1	31
5120-00-234-8912	Screwdriver, Cross Tip #3 (Ssd63)	1	31
5120-00-278-1283	Screwdriver, Flat Tip, Common Flared Side Plastic Handle, 6" Blade (11655777-11)	1	31
5120-00-189-7932	Socket, Wrench 2 X 9/16 (12 Pt) (11677025-1)	1	31
5120-00-189-7946	Socket, Wrench 2 X 5/8 (12 Pt) (11677025-2)	1	31

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TABLE III. Preservation methods of basic issue items (BII) for M981 - M981A3  
- Continued.

Identification number	Item description	Qty	Preservation method
5120-00-235-5870	Socket, Wrench 2 X 11/16 (12 Pt) (11677025-3)	1	31
5120-00-189-7985	Socket, Wrench 2 X 3/4 (12 Pt) (11677025-4)	1	31
5120-00-189-7934	Socket, Wrench 2 X 7/8 (12 Pt) (11677025-5)	1	31
5120-00-189-7935	Socket, Wrench 2 X 15/16 (12 Pt) (11677025-6)	1	31
5120-00-264-3796	Wrench, Open End, Adjustable 1-5/16" Jaw Opening, Size 12 Inch (11655778-5)	1	31
5120-00-277-2342	Wrench, Open End, Fixed 3/8 X 7/16 (11655789-1)	1	31
5120-00-187-7126	Wrench, Open End, Fixed 9/16 X 5/8 (11655789-2)	1	31
5120-00-277-8300	Wrench, Open End, Fixed 11/16 X 13/16 (11655789-3)	1	31
5120-00-293-2336	Ax, Single Bit, 4 Lb, 36" Long (6150925)	1	10
5120-00-288-6574	Handle, Mattock Pick (11677021)	1	10
5120-00-243-2395	Mattock, Pick (11677022)	1	10
5120-00-293-3336	Shovel, Round Point, D-Handle, Open Back (11655784)	1	10
1240-00-768-8707	Head Assy, Spare 1% (F0r M19) (7688707)	1	as applicable
7510-00-889-3494	Binder, Loose Leaf (11677003)	1	10
LO9-2350-266-12	Lubrication Order	1	10
TM9-2350-266-10	Operator's Tech Manual	1	10
LO9-2350-277-12	Lubrication Order	1	10
TM9-2350-277-10	Operator's Tech Manual (Vehicle And Power Plant)	1	10
7510-01-065-0166	Folder, Equipment Record (43986-1)	1	10
2510-01-105-0779	Cover, Grille, Engine (12269299)	1	10

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TABLE IV. Preservation methods of components of end item (COEI) for M981 - M981A3.

Identification number	Item description	Qty	Preservation method
2590-00-898-6771	Cover, Periscope (On M17 Periscope) (19207) 10866115	5	32
2540-00-679-8035	Hook, Tow (On Front Of Vehicle) (19207) 10861607	2	10
1005-01-050-2105	Mount, Machine Gun Arm (On Machine Gun Pintle Mount At Targeting Station) (19207) 12266287	1	32
6650-00-704-3549 or 6650-01-317-9138	Periscope, M17 (4 Around Driver's Hatch, 1 Spare Stored On Side Of Left Sponson) (19207) 12357918-2	5	as applicable
1240-01-005-6035	Periscope, M19a1 ( On Left Wall Of Driver's Station) (19200) 11747126	1	52
6650-01-370-3675	Periscope, M26 (1 In Top Deck Left Side, 1 In Top Deck Right Side) (19207) 12357850	2	as applicable
5315-00-598-5808	Pin, Lock, Tow Cable (On Tow Hook) (19207) 7752865	2	31
5315-00-862-2683	Pin, Straight, Tow Cable (On Tow Hook) (19207) 10890323	2	10

TABLE V. Processing inspection.

(See indicated paragraphs for levels A & B requirements.)

Component	Cleaning levels A & B	Preservation		Packaging/Stowage	
		level A	level B	level A	level B
Processing records				3.3.3	3.3.3
Disassembly				3.3.4	3.3.4
Matchmarking				3.3.4.1	3.3.4.1
Record forms				3.3.5	3.3.5
Interior of vehicle	3.3.6.1				
Battery supports & retainers	3.3.6.1.1	3.3.7.2	3.3.7.2		
Backrests & seats	3.3.6.1.2			3.3.8.3	3.4.6
Exterior of vehicle and weapon/targeting station	3.3.6.2				

TABLE V. Processing inspection - Continued.  
 (See indicated paragraphs for levels A & B requirements.)

Component	Cleaning levels A	Preservation		Packaging/Stowage	
		level A	level B	level A	level B
Relubrication		3.3.7.1	3.3.7.1		
Transmission, transfer assembly, control differential, and final drives <u>1</u> /		3.3.7.3	3.4.1		
Cooling system <u>1</u> /		3.3.7.4	3.3.7.4		
Water & antifreeze procedure		3.3.7.4.1	3.3.7.4.1		
Water & corrosion inhibitor procedure		3.3.7.4.2	3.3.7.4.2		
Antifreeze compound procedure		3.3.7.4.3	3.3.7.4.3		
Engine crankcase <u>1</u> /		3.3.7.5	3.4.2		
Compression ignition engine		3.3.7.6	3.4.3		
Fuel system and combustion chamber preservation		3.3.7.6.2	3.4.3		
Preservation thru air intake and exhaust system, without turbocharger		3.3.7.6.3	3.4.3	3.3.7.6.3	
Preservation thru air intake and exhaust system, with turbocharger		3.3.7.6.4	3.4.3	3.3.7.6.4	
Preservation thru oil level gage rod opening		3.3.7.6.5	3.4.3	3.3.7.6.5	
Preservation thru fly wheel housing		3.3.7.6.6			
Personnel & engine compartment heaters and lines		3.3.7.7	3.4.4		
Fuel tank		3.3.7.8	3.4.5		

TABLE V. Processing inspection - Continued.  
 (See indicated paragraphs for levels A & B requirements.)

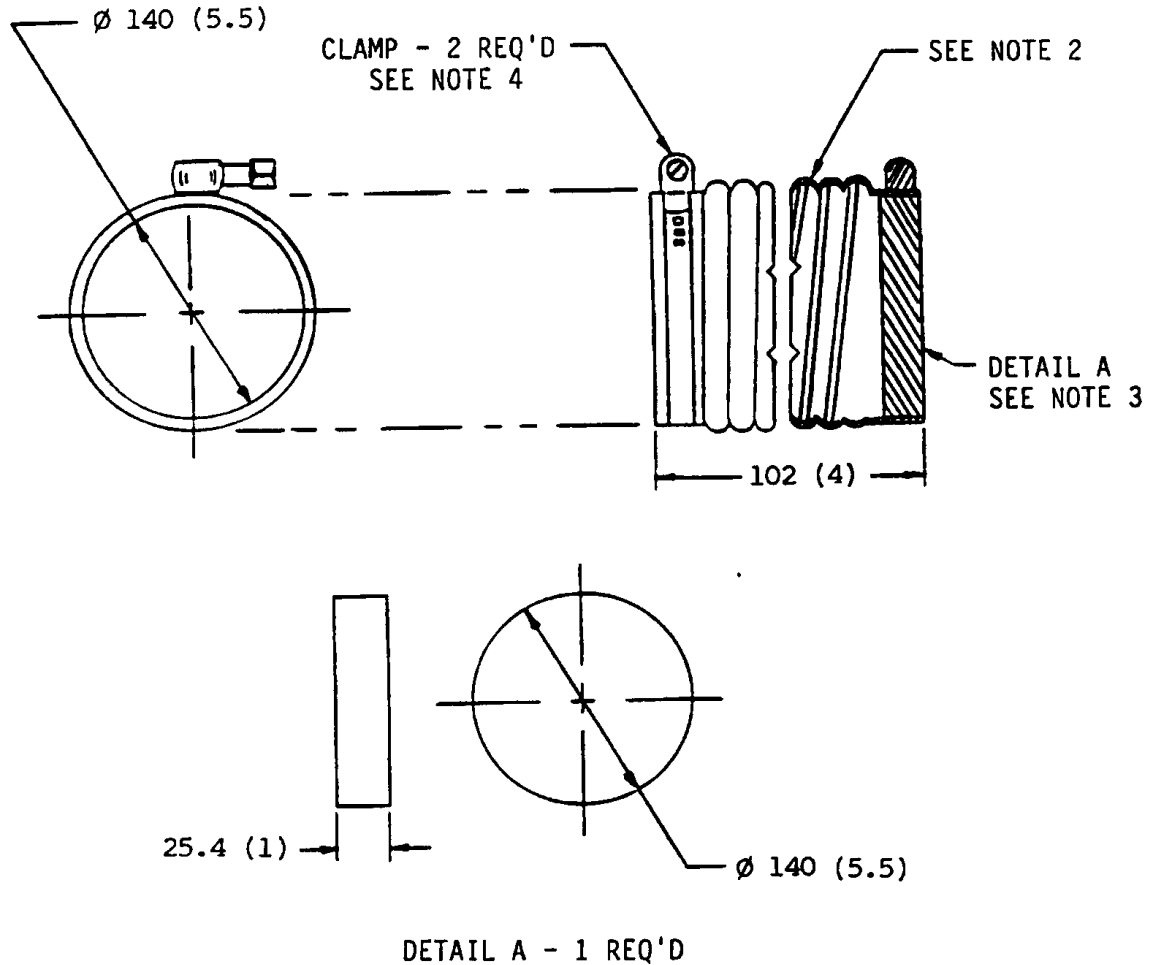
Component	Cleaning levels A	Preservation		Packaging/Stowage	
		level A	level B	level A	level B
Fuel tank security				3.3.7.8.1	
Ramp lift assembly		3.3.7.9	3.3.7.9		
Ramp hydraulic reservoir		3.3.7.9.1	3.3.7.9.1		
Weapon/targeting station hydraulic system		3.3.7.10	3.3.7.10		
Machine gun pintle mount		3.3.7.11	3.3.7.11	3.3.7.11	3.3.7.11
Hatches & doors		3.3.7.12	3.3.7.12		
Engine compartment access plate, gasket, and drain plugs		3.3.7.13.1	3.3.7.13.1	3.3.8.10	3.3.8.10
Engine compartment access panels				3.3.7.13.2	3.4.9
Miscellaneous preservation		3.3.7.14	3.3.7.14		
Dry charged batteries & cables		3.3.8.1	3.3.8.1	3.3.8.1	3.3.8.1
Electrolyte				3.3.8.2	3.3.8.2
Squad leader's panoramic telescope				3.3.8.4	3.3.8.4
PLRS antenna and radio antenna(s)				3.3.8.5	3.3.8.5
Periscope(s) and vision block(s)				3.3.8.6	3.3.8.6
Weapon/targeting station				3.3.8.7	3.3.8.7
BII and COEI				3.3.8.8	3.3.8.8
Stowage and secure- ment of BII and COEI				3.3.8.9	3.3.8.9
Tow hooks				3.3.8.9.1	3.3.8.9.1
Vehicle closure kit				3.3.8.11	3.4.8

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TABLE V. Processing inspection - Continued.  
(See indicated paragraphs for levels A & B requirements.)

Component	Cleaning levels A	Preservation		Packaging/Stowage	
		level A	level B	level A	level B
COEI box marking				3.3.9.1.1	3.4.7
Loading flat cars				3.6.1	3.6.1
Highway shipment				3.6.2	3.6.2
Reprocessing engine after loading				3.6.3.1	3.6.3.2
Marking				3.7	3.7
Lifting points				3.7.1	3.7.1

1/ Inspect DA Form 2258

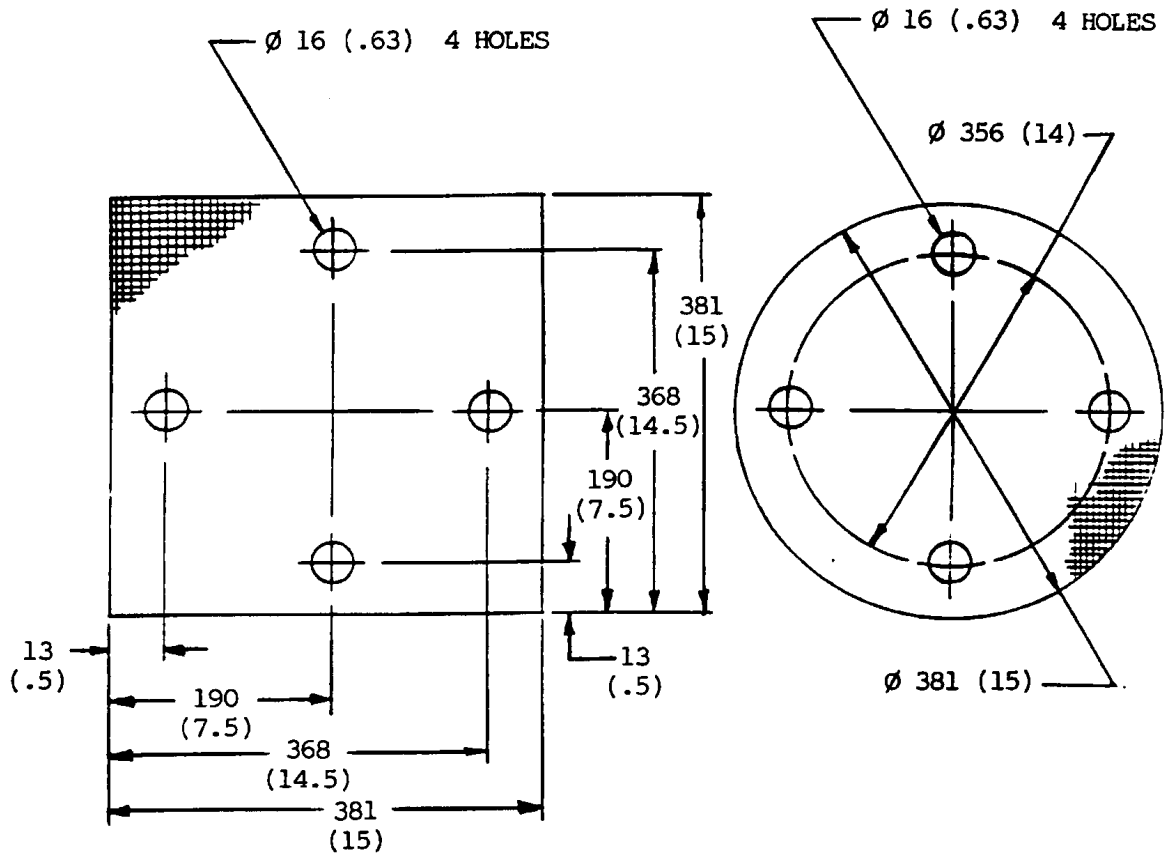


NOTES:

1. Dimensions are in millimeters with inches shown in parentheses.
2. Flexible hose shall be made from material conforming to MIL-H-52079 or equivalent.
3. Plug shall be made from 25.4 mm (1 inch) plywood, A-A-55057, type A, STD. INT. with EXT. glue.
4. Type F clamp conforming to A-A-52506 or equivalent.

FIGURE 1. Boot, air restrictor.

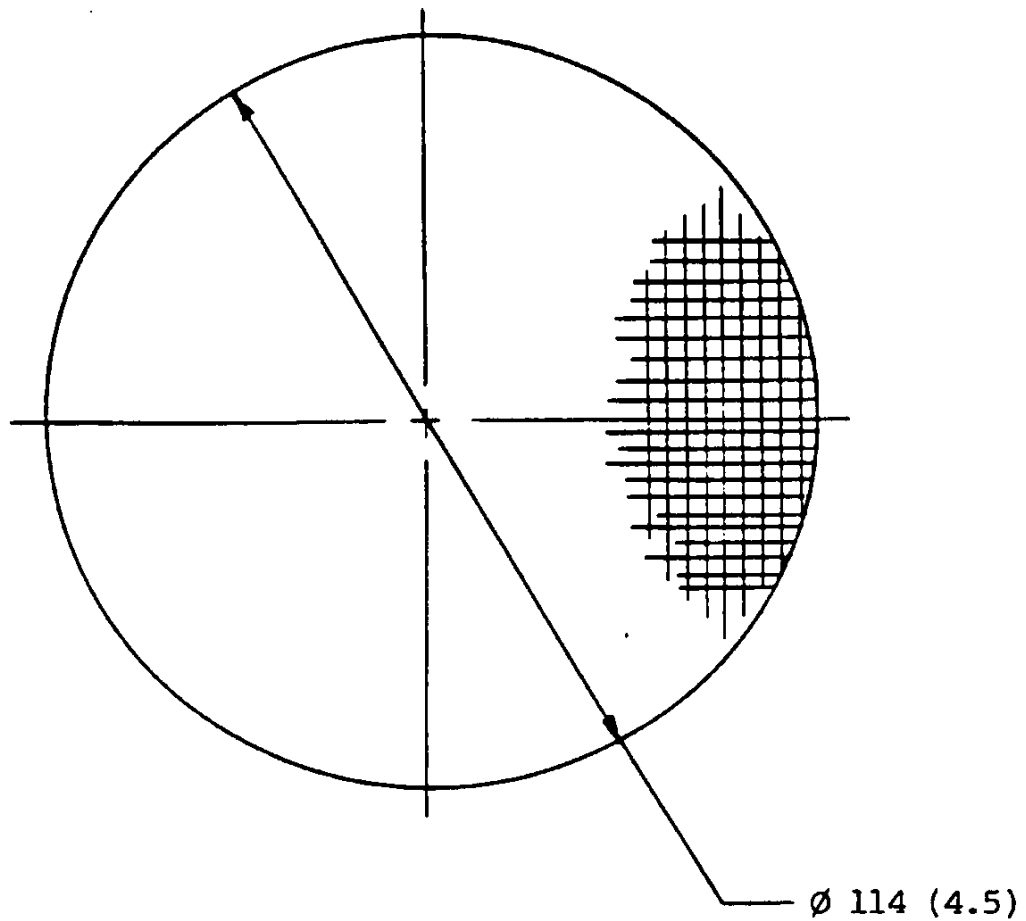




NOTES:

1. Dimensions are in millimeters with inches shown in parentheses.
2. Screen material shall be wire cloth, type I, class I, 4x4 mesh, 0.884 mm (0.0348 inch) diameter, in accordance with ANSI O1.
3. Holes may be formed with drift pin at installation.

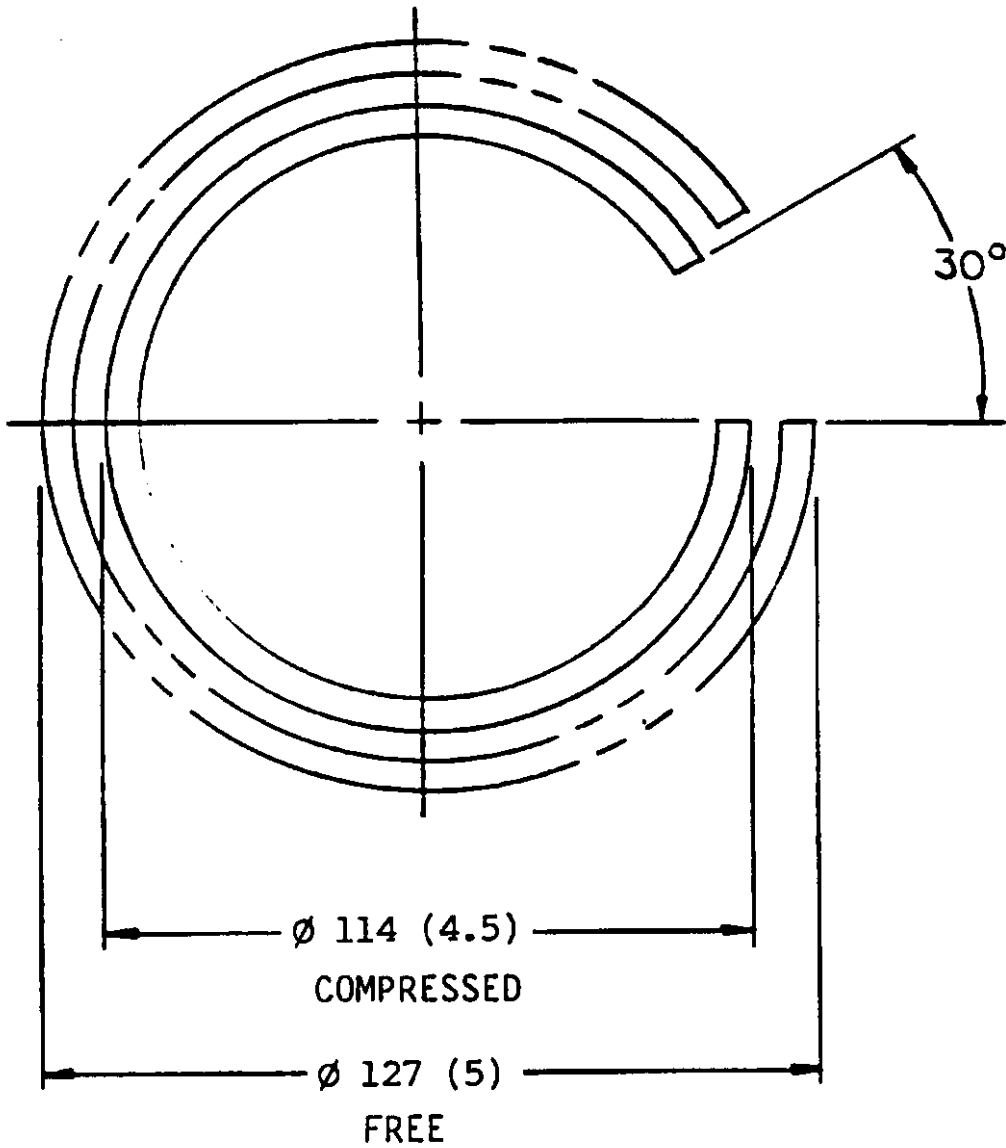
FIGURE 2. Screen.



NOTES:

1. Dimensions are in millimeters with inches shown in parentheses.
2. Screen material shall be wire cloth, type I, class I, 4x4 mesh, 0.884 mm (0.0348 inch) diameter, in accordance with ANSI O1.

FIGURE 3. Screen



NOTES:

1. Dimensions are in millimeters with inches shown in parentheses.
2. Material shall be carbon steel, music wire, 4 mm (0.156 inch) diameter, in accordance with ASTM A228/A228M.

FIGURE 4. Spring, retainer.

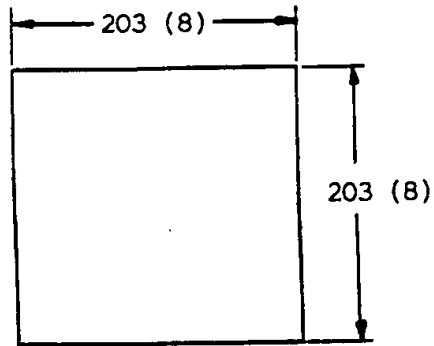


FIG. 5a

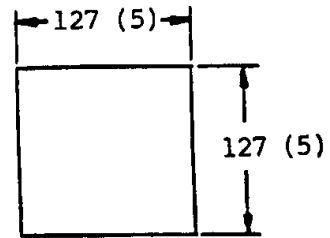


FIG. 5b

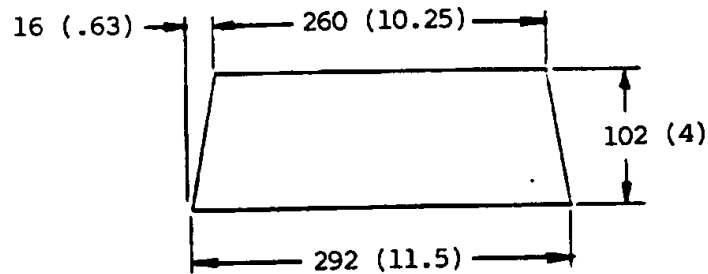


FIG. 5c

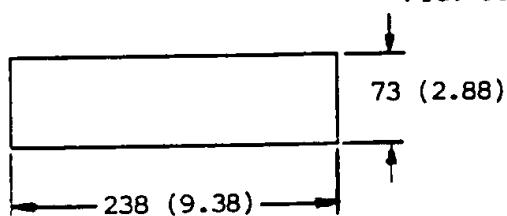


FIG. 5d

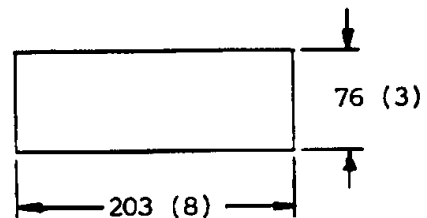


FIG. 5e

NOTES:

1. Dimensions are in millimeters with inches shown in parentheses.
2. Material - hardboard in accordance with ANSI/AHBA A135.4, class 2, surface 2 (S2S), plain board, sealed surface, 3.2 mm (0.125 inch) thick.
3. Smooth rough edges.

FIGURE 5. Hardboard covers.

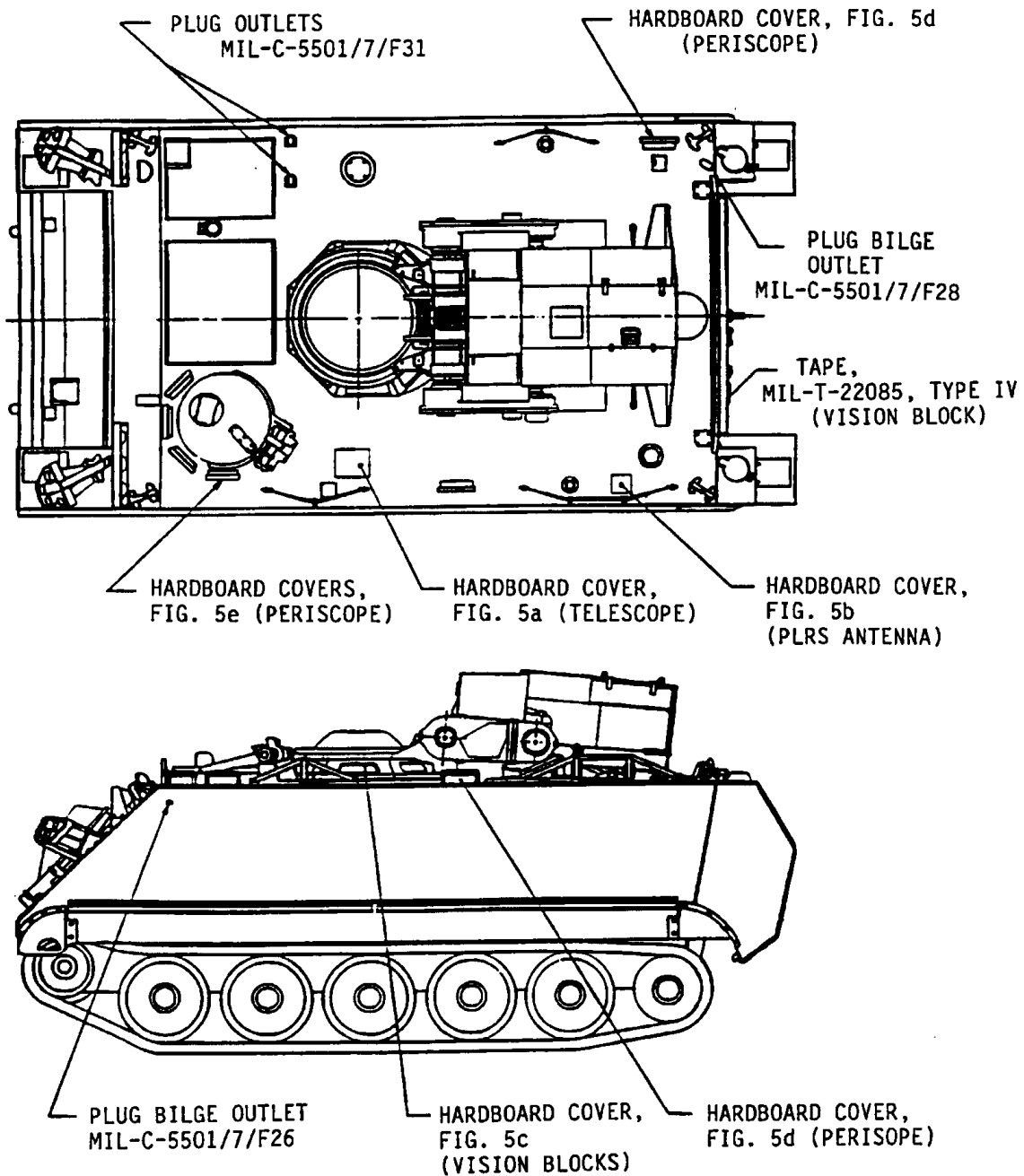
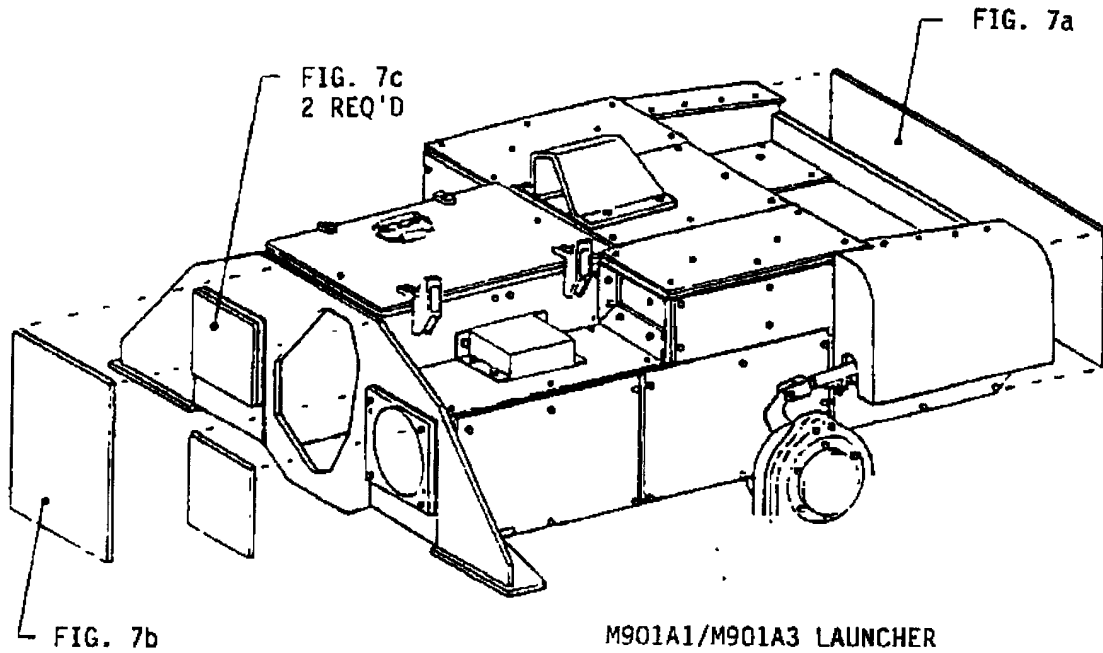
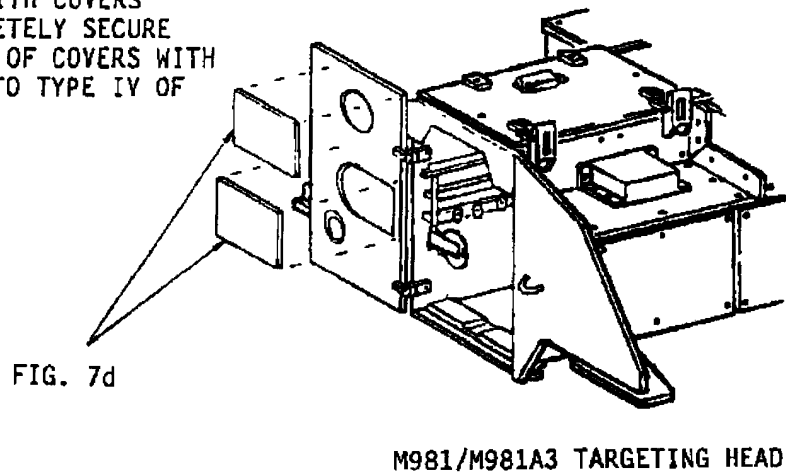


FIGURE 6. Closure locations.

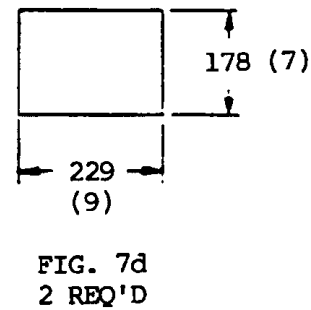
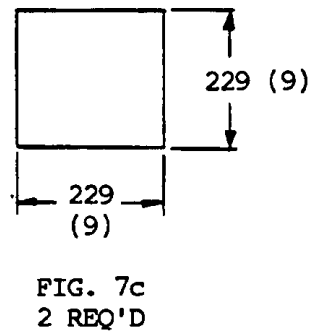
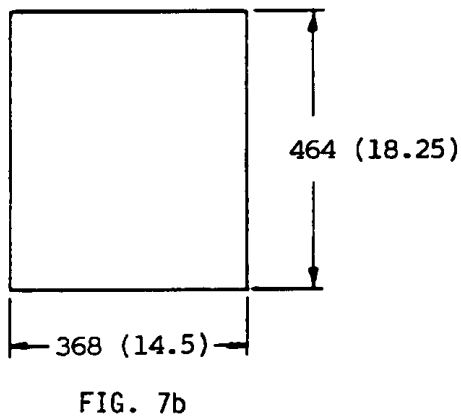
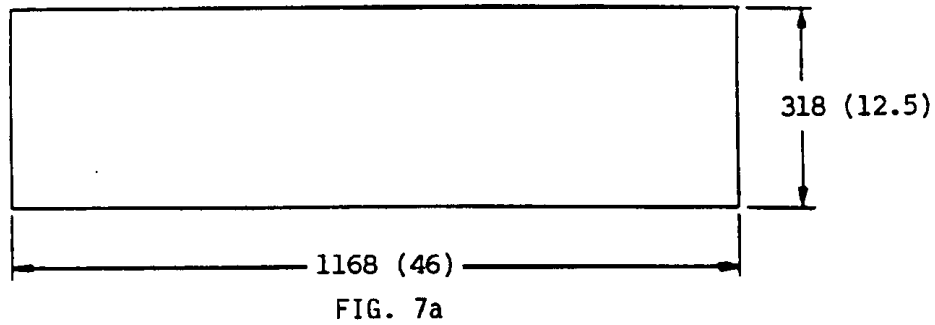


CLOSE OPENINGS WITH COVERS  
AS SHOWN. COMPLETELY SECURE  
ALL AROUND EDGES OF COVERS WITH  
TAPE CONFORMING TO TYPE IV OF  
MIL-T-22085.



SHEET 1 OF 2

FIGURE 7. Hardboard closure.



NOTES:

1. Dimensions are in millimeters with inches shown in parentheses.
2. Material - hardboard in accordance with ANSI/AHBA A135.4, class 2, surface 2 (S2S), plain board, sealed surface, 3.2 mm (0.125 inch) thick.

SHEET 2 OF 2

FIGURE 7. Hardboard closure - Continued.

APPENDIX A

REQUIREMENTS FOR CONVERTING THE LAUNCHER AND THE TARGETING  
HEAD FROM STANDARD TO TRANSPORT CONFIGURATION,  
AND BACK TO STANDARD

A.1 SCOPE

A.1.1 Scope. This appendix covers the requirements for reducing the M901A1, M901A3, M981, and M981A3 vehicle overall height for transport. This appendix is a mandatory part of the purchase description. The information contained herein is intended for compliance.

A.2 APPLICABLE DOCUMENTS

A.2.1 General. The documents listed in this section are specified in Appendix A of this purchase description. This section does not include documents cited in other sections of this purchase description or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements documents cited in Appendix A of this purchase description, whether or not they are listed.

A.2.2 Government documents.

A.2.2.1 Specifications. The following specifications form a part of this document to the extent specified herein. Unless otherwise specified, the issues of this document are those listed in the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2).

SPECIFICATIONS

DEPARTMENT OF DEFENSE

MIL-P-17667 - Paper, Wrapping, Chemically Neutral (Non-Corrosive)

(Unless otherwise indicated, copies of the above specification are available from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)



APPENDIX A

A.2.2.2 Other Government documents. The following other Government documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues are those cited in the solicitation.

TECHNICAL MANUALS (TM)

- |               |  |
|---------------|--|
| 9-2350-259-20 | - Unit Maintenance Manual for Combat Vehicle, Anti-Tank, Improved Tow Vehicle, M901A1 and M901A3.      |
| 9-2350-266-20 | - Unit Maintenance Manual for Carrier, Personnel, Full Tracked, Armored Fire Support, M981 and M981A3. |

(Unless otherwise indicated, copies of technical manuals are available from the U.S. Army Tank-automotive and Armaments Command, AMSTA-TR-E/BUE, Warren, MI 48397-5000.)

A.3 REQUIREMENTS

A.3.1 Standard to transport configuration conversion procedure. To reduce the M901A1/M901A3 overall vehicle height for transport, launcher/targeting unit shall be placed in erect position. Conversion procedures and item removal shall be as specified in A.3.2 thru A.3.5.

A.3.2 Hydraulic pressure bleed-down procedure (M901A1/M901A3 only). To bleed off hydraulic pressure, the following procedure shall be completed:

- a. Apply power to turret in the normal manner to place launcher in erect position at 180 degrees in azimuth (facing rear).
- b. Set EMER PWR switch to UP position.
- c. Move hand controller up and down in elevation, until launcher ceases motion.
- d. Set TURRET POWER switch to OFF, and then set EMER PWR switch to OFF.
- e. Ensure that ERECTION LOCKS are engaged. If not, repeat steps a through d to ensure erection locks remain engaged.
- f. Support front of launcher, using two C-clamps (NSN 5120-00-203-6431) and two 2 x 4 lumber bracing as shown in figure A.1, sheet 1.

A.3.3 Hydraulic pressure bleed-down procedure (M981/M981A3 only). To bleed off hydraulic pressure, the following procedure shall be completed:

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- a. Apply power to turret in the normal manner to place the targeting head in erect position at least 180 degrees in azimuth.
- b. Set PUMP switch on TSCD to DISABLE.
- c. Move hand controls up and down in elevation in small increments until targeting head ceases motion.
- d. Set TSCD PWR switch to OFF and set PUMP switch to ON.
- e. Ensure that lock cylinders are engaged.
- f. Support front of targeting head, using two C-clamps (NSN 5120-00-203-6431) and two 2 x 4 lumber bracing shown in figure A.1, sheet 1.

A.3.4 Bracket removal procedure. The following procedure shall be completed to remove vehicle storage brackets (see figure A.1, sheet 1):

- a. Remove two launcher/targeting head stow supports (see figure A.1, detail A).
- b. Remove two stow position stops from rear of erection arm (see figure A.1, detail B).
- c. From each erection arm support, remove each support bumper and shims and reassemble these items to the loading hatch as shown in figure A.1, detail C. Remove each erection arm support (see figure A.1, detail C). On the M901A1/M901A3 vehicles, the side armor plates shall be in the low position (see figure A.1, sheet 1).
- d. Identify all removed items and attaching hardware and package in a container conforming to type CF, class Weather-Resistant of ASTM D5118. Closure shall conform to ASTM D1974. Stow within vehicle.

A.3.5 Removal of wide angle objective cell. The following procedure shall be completed to remove the objective cell cover and objective cell assembly (see figure A.1):

- a. Remove access cover to gain access to wide angle objective cell (see figure A.1, detail D). After cover has been removed, cut lockwire on cell housing and unscrew adjustable housing to remove wide angle objective cell. Wrap critical portion of telescope lens with lens tissue conforming to A-A-50177. Overwrap complete assembly with cushion wrap conforming to A-A-1898. Place cushioned item into container conforming to type CF, class Weather-Resistant of ASTM D5118. Closure shall be in accordance with ASTM D1974. Stow within vehicle.
- b. Secure removed access cover back to weapon station. Remove housing assembly from access cover as shown in figure A.1, detail D. Cushion wrap housing and hardware with wrap conforming to type II of MIL-B-17667. Place items into container conforming to type CF, class Weather-Resistant of ASTM D5118. Closure shall be in accordance with ASTM D1974. Stow within vehicle.
- c. Cover the housing opening with a hardboard cover as shown in figure A.1, detail D. Secure cover in place with tape conforming to type IV of MIL-T-22085.

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A.3.6 Removal of elevation indicator. The following procedure shall be completed to remove the elevation indicator:

- a. Remove two screws, washers, elevation pointer, and four washers from upper inboard side of right-hand erection arm (see figure A.1, detail E).
- b. Reinstall two screws and washers to full depth on erection arm.
- c. Identify remaining items and package into container conforming to type CF, class Weather-Resistant of ASTM D5118. Closure shall be in accordance with ASTM D1974. Stow within vehicle.

A.3.7 Removal of ventilator cover. If ventilator cover has not been removed, the following procedure shall be completed:

- a. Remove bolt, ventilator cover, and spacers (see figure A.1, detail F).
- b. Identify all items and package into container conforming to type CF, class Weather-Resistant of ASTM D5118. Closure shall be in accordance with ASTM D1974. Stow within vehicle.
- c. Cover opening with a hardboard cover as shown in figure A.1, detail F. Secure cover in place with tape conforming to type IV of MIL-T-22085.

A.3.8 Removal of forward plate (M981 only). The following procedure shall be completed to remove the forward plate:

- a. Remove two cotter pins, flat washers, two straight headed pins, and forward plate assembly (see figure A.1, detail G).
- b. Remove six screws, two erection arm guides and erection arm shims (see figure A.1, detail G).
- c. Identify all hardware removed in A.3.8a and A.3.8b and package into container conforming to type CF, class Weather-Resistant of ASTM D5118. Closure shall be in accordance with ASTM D1974. Stow within vehicle.

A.3.9 Launcher/targeting head crank down procedure for stow position. The following procedure shall be completed to place the launcher/targeting head into stow position:

- a. Apply system power, remove 2 x 4 lumber bracing and clamps (see figure A.1, sheet 1) and then place launcher/targeting head to the elevation stowed position as indicated by the elevation stow light.
- b. For M901A1/M901A3, set MODE SELECT switch to STOW.
- c. For M981/M981A3, set HEAD switch to STOW.

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- d. Use the erection drive switch to move launcher/targeting head to the high stow position.
- e. Remove cap from erection arm and install handcrank (see figure A.1, detail H). Turn handcrank clockwise to crank launcher/targeting head down to the deck.

CAUTION: All personnel should stand clear of handcrank.  
Handcrank may occasionally jump abruptly.

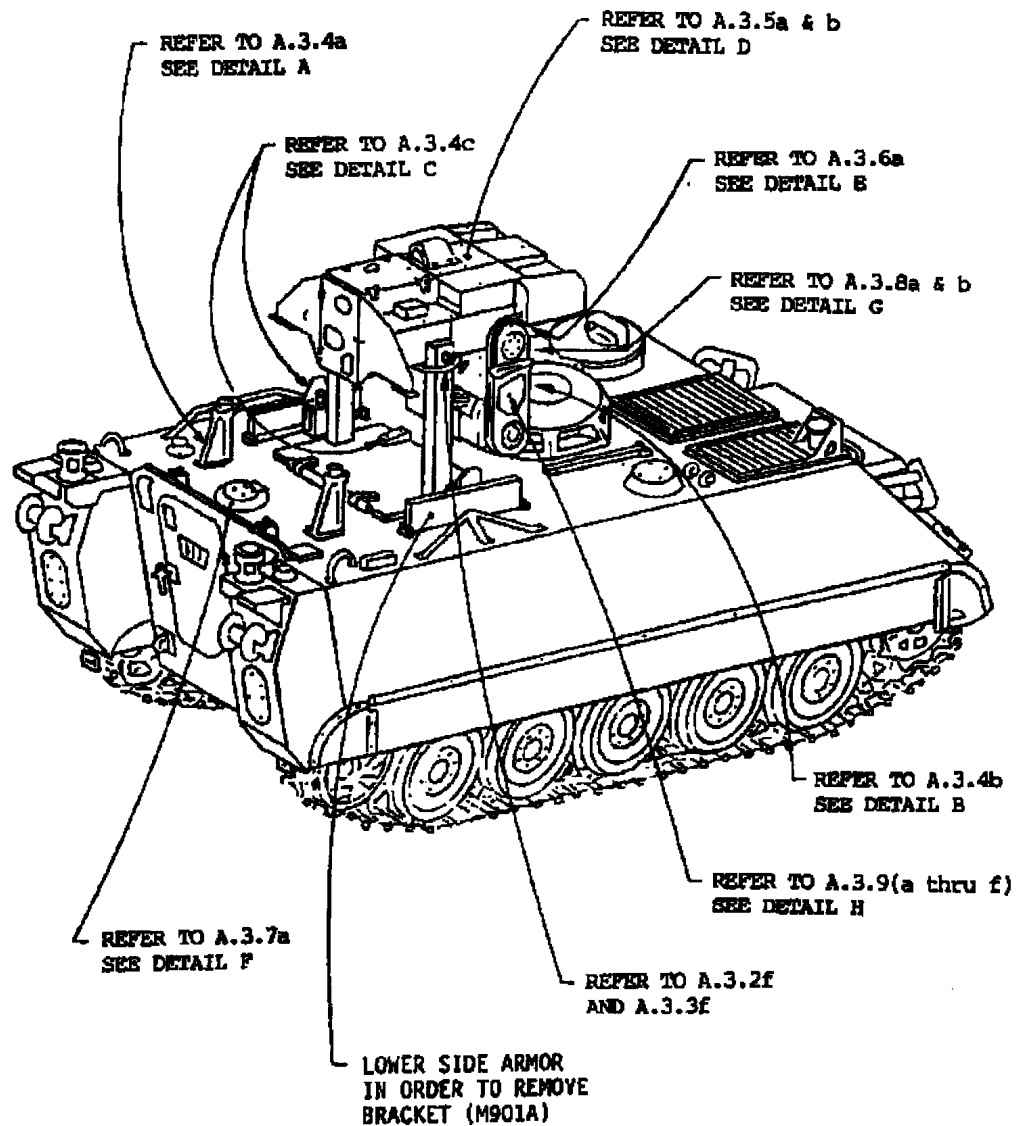
- f. Remove handcrank, reinstall cap, and turn off system power.

A.3.10 Transport to standard configuration conversion procedure. To place the M901A1/M901A3 or M981/M981A3 vehicles into standard configuration, the following technical manuals shall be used:

TM9-2350-259-20, Unit Maintenance Manual for Combat Vehicle, Anti-Tank, Improved Tow Vehicle, M901A1 and M901A3.

TM9-2350-266-20, Unit Maintenance Manual for Carrier, Personnel, Full Tracked, Armored Fire Support, M981 and M981A3.

APPENDIX A



SHEET 1 OF 5

FIGURE A.1. Converting to transport configuration.

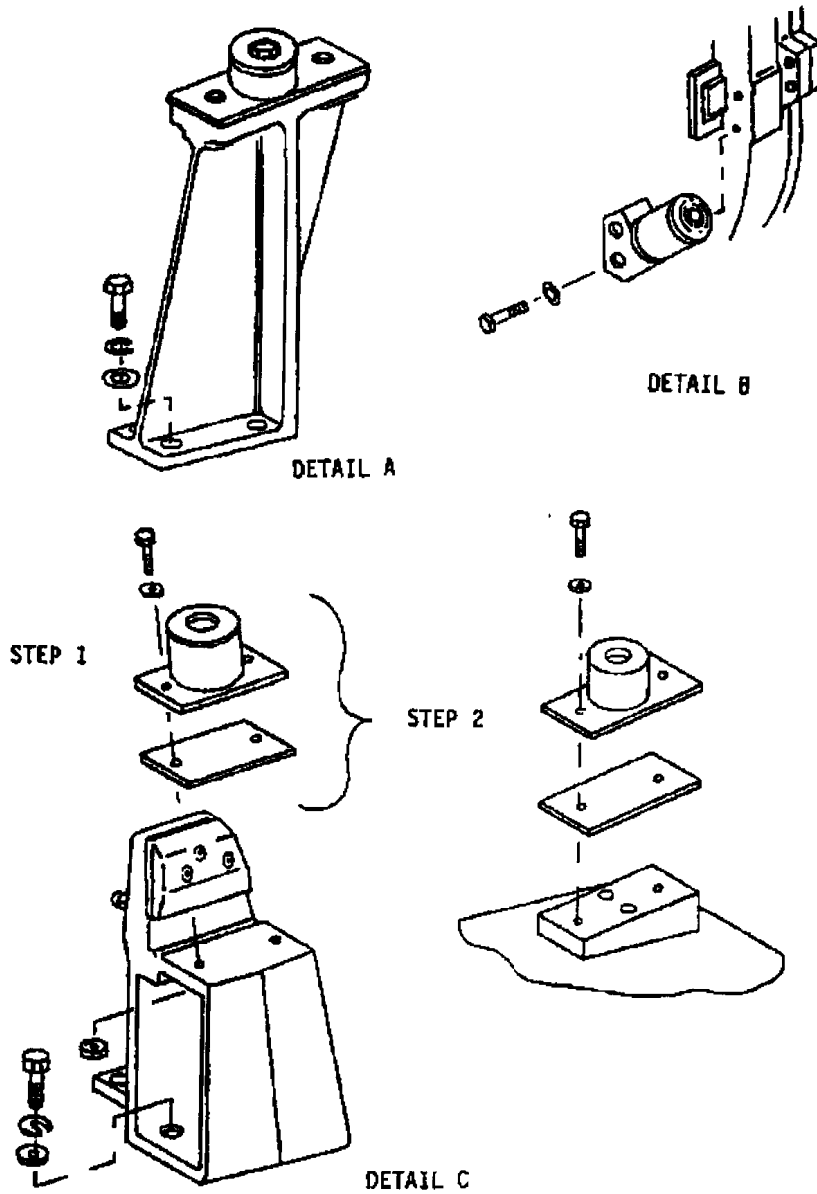
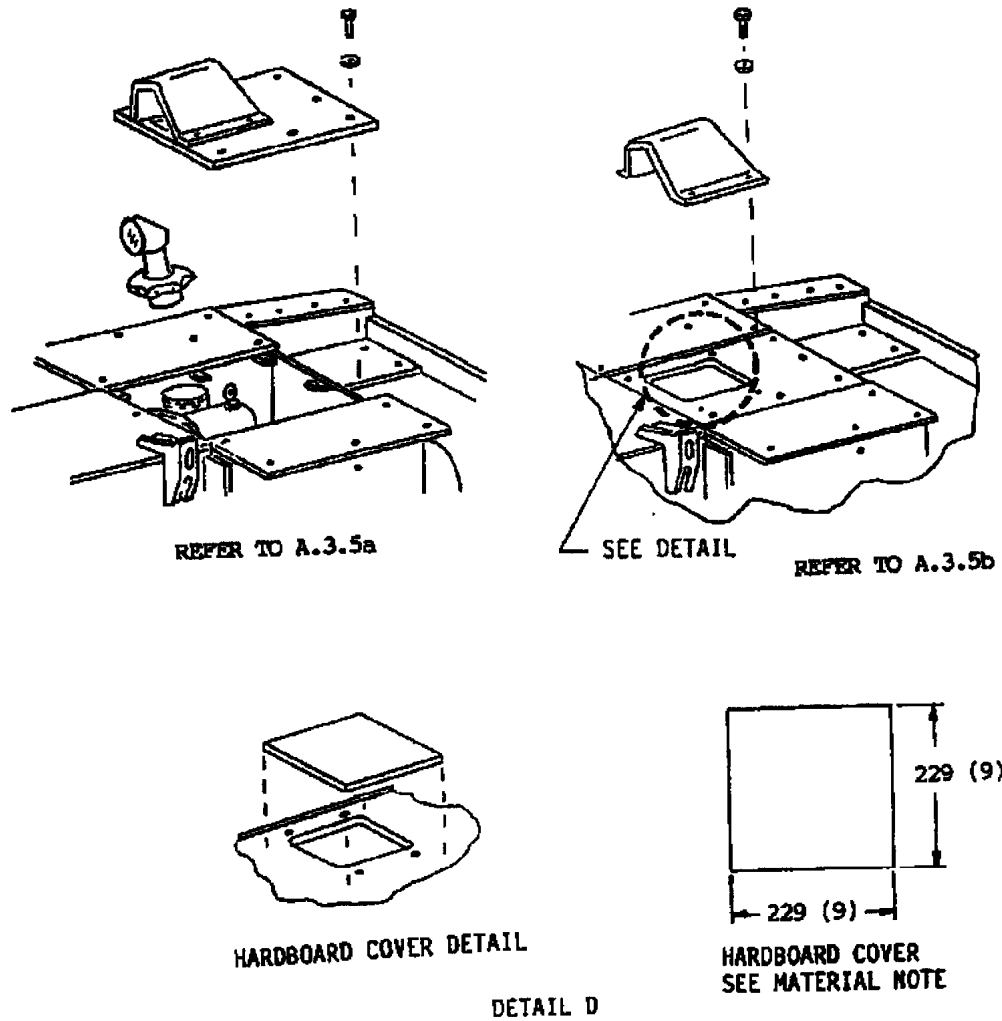


FIGURE A.1. Converting to transport configuration - Continued.

APPENDIX A



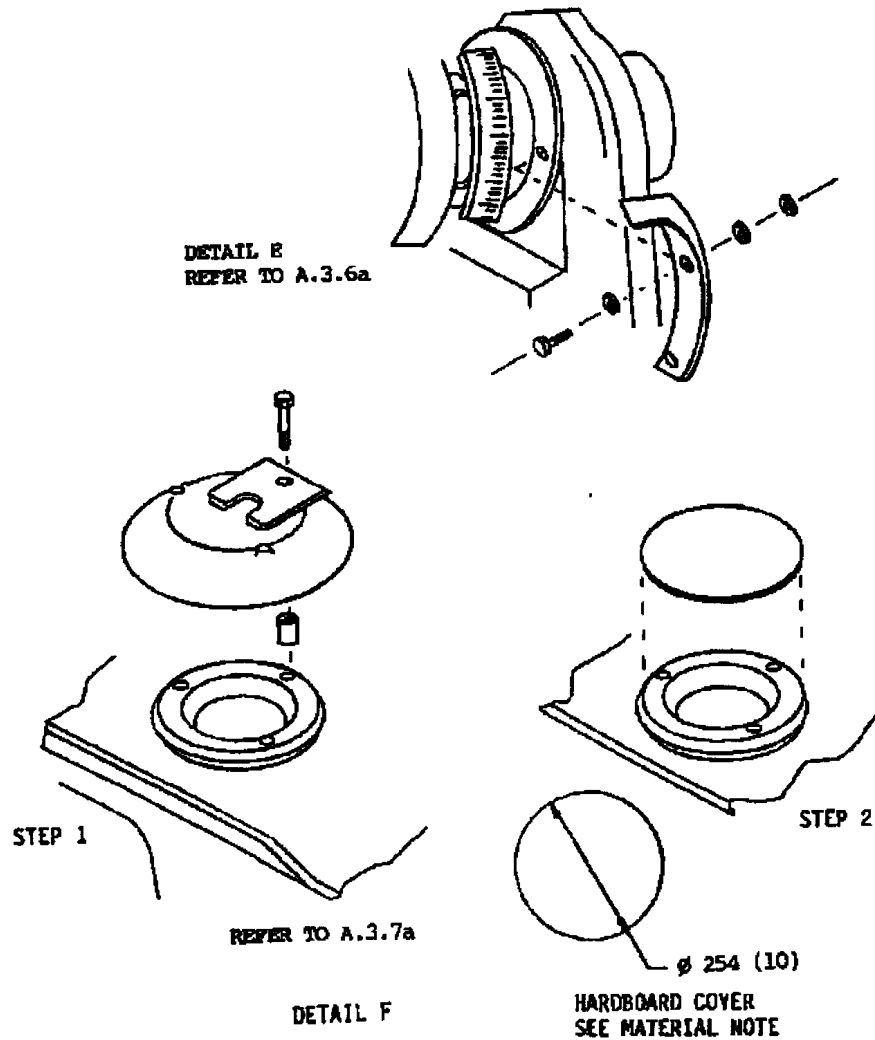
SHEET 3 OF 5

NOTE:

1. Dimensions are in millimeters with inches shown in parentheses.
2. Material - hardboard in accordance with ANSI/AHBA A135.4, class 2, surface 2 (S2S), plain board, sealed surface, 3.2 mm (0.125 inch) thick.

FIGURE A.1. Converting to transport configuration - Continued.

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SHEET 4 OF 5

NOTE:

1. Dimensions are in millimeters with inches shown in parentheses.
2. Material - hardboard in accordance with ANSI/AHBA A135.4, class 2, surface 2 (S2S), plain board, sealed surface, 3.2 mm (0.125 inch) thick.

FIGURE A.1. Converting to transport configuration - Continued.



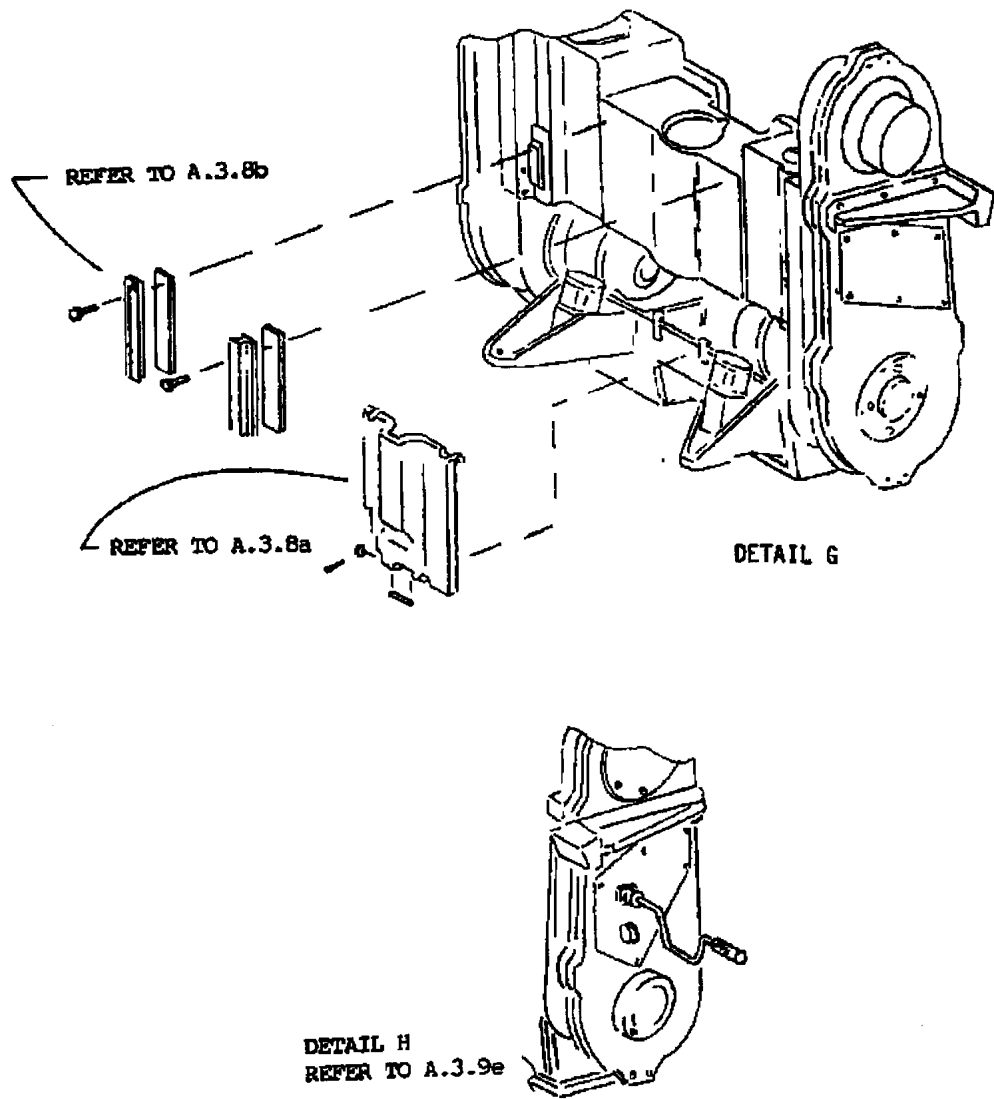


FIGURE A.1. Converting to transport configuration - Continued.